Austria ... Sch 15	Indonesia ... Rp 2500	Portugal ... Esc 65
Bahrain ... Din 0.650	Italy ... L 1100	S. Arabia ... Rs 6.00
Belgium ... BFr 25	Japan ... Y550	Singapore ... S$ 4.10
Canada ... C$1.50	Jordan ... Fils 500	Spain ... Pts 95
Cyprus ... Mils 600	Kuwait ... Fils 500	Sri Lanka ... Rup 30
Denmark ... DKr 7.00	Lebanon ... LL 6.00	Sweden ... SKr 6.50
Egypt ... E£1.00	Luxembourg ... LFr 35	Switzerland ... SFr 2
Finland ... Fmk 5.50	Malaysia ... Rm 4.25	Taiwan ... NT $65
France ... Fr 5.50	Mexico ... Pes 300	Tunisia ... Din 0.600
Germany ... DM 2.00	Morocco ... Dh 6.00	Turkey ... L 160
Greece ... Dr 60	Netherlands ... Fl 2.75	U.A.E. ... Dh 6.50
Hong Kong ... HK$ 12	Norway ... Kr 6.00	U.S.A. ... $1.50
India ... Rup 15	Philippines ... Peso 20	

FINANCIAL TIMES

EUROPE'S BUSINESS NEWSPAPER

No. 29,147 | Monday October 17 1983 | D 8523 B

European steel in state of change, Page 18

NEWS SUMMARY

GENERAL

Israeli soldiers fire on civilians

Israeli soldiers fired on a crowd of civilians advancing towards them in the southern Lebanon town Nabatiye, wounding at least 10.

An estimated 50,000 in the town were celebrating a Moslem festival. A crowd attacked the Israeli soldiers with sticks and stones, injuring four, and set four Israeli vehicles on fire.

An Israeli military official, however, said that the soldiers had come under rifle fire.

To the north, there were several more violations of the ceasefire, with heavy fighting between Christian and Druze militia. The embattled Chouf mountain town Souq al-Gharb came under fire again. **Lebanon invites Greece and Italy, Page 3**

Israel strike

While Israeli Premier Yitzhak Shamir continued his efforts to pick an acceptable new Finance Minister, virtually all the country's workers staged a two-hour strike to warn the Government not to try to alter wage agreements.

Schools, businesses, public services, ports and radio stations were all closed. **Page 3**

'Premier arrested'

Grenada Premier Maurice Bishop was said to be under house arrest after an apparent coup in the Caribbean island over the weekend. **Page 3**

Belgian protest

More than 1,000 police and gendarmes marched in Brussels in protest against what they called the lax attitude of the Belgian Government to the increase in violent crime.

Separatists strike

Breton nationalists said they set off a bomb which damaged the law courts in Rennes, France. An arms cache that included dynamite, grenades and rifles was found in Bastia, a centre for Corsican separatists. In Spain, a civil guard was killed and two injured by a bomb in the Basque town Onate. Two members of a far left group were killed in a shoot-out with security forces in Fatsa, northern Turkey.

Malaysia alert

Malaysia put police and security forces on alert after an Interpol report said international terrorists were planning a hijacking from an airport.

Marcos rejected

Philippines opposition leaders rejected an invitation from President Ferdinand Marcos to help prepare for next year's elections, which they said they would boycott if he stayed in power.

Lijar declares peace

The small southern Spanish town *Lijar, which formally* declared war on France in October 1883 after Spain's King Alfonso XII had been stoned and insulted in Paris, ended a war in which no shots were fired, by council decree.

McEnroe banned

Wimbledon champion John McEnroe was banned from tennis competition for 42 days and fined $1,500 for abusing an official during his straight-set win over Henri Laconte (France) in the final of the Australian indoor championship at Sydney.

Briefly . . .

Uganda will tax women for the first time in 1984.

Swiss Foreign Minister Willi Ritschard, 65, died of a heart attack.

French frogmen and helicopters rescued 29 crew from a blazing Bahamian tanker.

BUSINESS

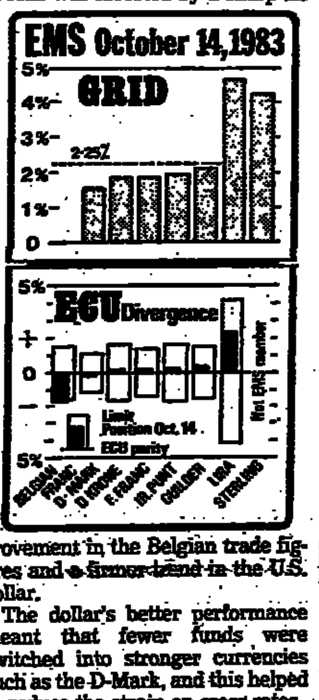
Spain halves its nuclear fuel plans

● **SPAIN**, which has five nuclear reactors in operation, is to halve its programme to provide more nuclear power by postponing or dropping five planned reactors. **Page 20**

● **ARGENTINA'S** creditor banks have said it should draw a first $500m instalment of its $1.5bn debt rescue loan on October 28. **Page 21**

● **U.S.** Export-Import Bank is reducing charges for medium and long-range loans to intermediate and poor countries. **Page 7**

● **PRESSURE** eased on the weaker members of the European Monetary System last week. The Belgian franc was again at the bottom of the system and continued to trade outside its Ecu divergence limit, but the weaker trend seen in recent weeks was arrested by a sharp improvement in the Belgian trade figures and a firmer trend in the U.S. dollar.



The dollar's better performance meant that fewer funds were switched into stronger currencies such as the D-Mark, and this helped to reduce the strain on cross rates.

This was underlined by the D-Mark slipping below the French franc within the system, to be placed next to the Belgian franc.

The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2¼ per cent. The lower chart gives each currency's divergence from its "central rate" against the European Currency Unit (ECU), itself a basket of European currencies.

● **PETROFINA**, the Brussels-based energy group, is cutting the price of its industrial oil products by up to 23 per cent. **Page 11**

● **BELGIAN** garage owners are suing oil companies Mobil and Vega for selling petrol at below cost price in a cut-price war.

● **KUWAIT** has reduced its prices for liquefied petroleum gas for the third time in three months to match Saudi cuts. Propane is down from $260 a tonne to $225.

● **REFORMING** Lloyd's, London's *international insurance* market, could cost members up to £10m ($15m). **Page 8**

● **UK** Inland Revenue has been investigating the relationship between Lloyd's insurance underwriters and companies based in offshore tax havens. **Page 26**

● **KOMATSU** of Japan, world's second largest construction equipment maker, is spending £1m ($1.5m) in re-equipping its UK operation with labour-saving equipment. **Page 11**

● **CHO-HEUNG BANK** (South Korea) president was charged with taking $250,000 in bribes to help property group Yongdong obtain loans.

● **SEARS WORLD TRADE**, new international arm of U.S. retailer Sears Roebuck, is paying UK holding company Tozer, Kemsley and Millbourn a minimum £3.3m for Price and Pierce, world's largest timber and pulp brokers. **Page 23**

China welcomes latest measure to protect HK$

BY ALAIN CASS, ASIA EDITOR, IN HONG KONG

The decision by the Hong Kong Government at the weekend to peg its currency to the U.S. dollar has been welcomed by the Bank of China. In a rare statement, China's National Bank said that "much stronger action and stern effort" would be needed to support the Hong Kong dollar at a fixed rate.

The measures to protect Hong Kong's currency include pegging the rate of notes in circulation to a new rate of HK $7.80 to the U.S. dollar and abolishing the tax on interest paid on local Hong Kong dollar deposits.

Bankers in Hong Kong yesterday gave the new measures a cautious welcome, describing them as "timely."

There was concern, however, that unless confidence in the colony's political future was quickly re-established, the Government would find it difficult to defend the new rate and would have to intervene heavily in the market.

Peking has accused Britain and Hong Kong of allowing the dollar to fall as a way of demonstrating that China's claim to sovereignty over the colony is damaging confidence.

The announcement, made on Saturday, was apparently timed to coincide with the fifth round of talks over the colony's future, which open in Peking on Wednesday.

It was reliably understood yesterday that the British negotiating team headed by Sir Percy Cradock, Ambassador in Peking, will carry a letter to the Chinese side from Mrs Margaret Thatcher, the Prime Minister, outlining some new ideas.

Officials in Hong Kong were anxious yesterday to dampen speculation about a breakthrough in the talks, which have appeared to be deadlocked. But it seems that the meeting earlier this month in London between Mrs Thatcher, Sir Edward Youde, Hong Kong's Governor, and members of the colony's appointed Executive Council broke some new ground.

Announcing the new measures on Saturday, Sir John Bremridge, the Financial Secretary, said that "a return of confidence in our currency is essential."

He said that the recent fall was "tending to feed on itself in an unstable and irrational manner," and that the depreciation was not justified by economic conditions.

The Hong Kong dollar was trading at HK$8.24 to HK$8.25 to the U.S. dollar on Thursday, when the markets closed for a long weekend. The new rate is therefore tantamount to a 5 per cent devaluation.

Over the past year the Hong Kong dollar has plunged by more than 30 per cent, reaching a low of HK$9.65 against the U.S. currency.

As a result of the Hong Kong Government's decision, the two note-issuing banks in Hong Kong – Hongkong and Shanghai Banking Corporation and the Chartered Bank – will deposit foreign exchange in the Government Exchange Fund equivalent to the currency they print.

The Government in turn will give the banks certificates of indebtedness which they will guarantee at the rate of HK$7.80 to the U.S. dollar.

Government officials stressed

Continued on Page 20

Market to make judgment, Page 2

Japanese discount rate cut expected

By Charles Smith in Tokyo

THE BANK of Japan is poised to cut its discount rate probably by 0.5 per cent after nearly 22 months during which the rate has remained fixed at 5.5 per cent, it is reliably understood.

The cut is expected soon, possibly by the end of this week, so as to coincide with a package of import promotion and reflation measures on which the Japanese Government is working.

Before reaching a final decision, however, Central Bank officials are said to be planning a review of conditions on the Tokyo foreign exchange market.

Lower rates could widen the interest rate differential between Japan and the U.S. and thus risk weakening the yen exchange rate.

But Bank of Japan officials seem to be moving cautiously towards the view that the yen is strong enough to withstand some pressure.

A cut in the rate would provide an important psychological boost to the Japanese economy, which began a tentative export-led recovery during the summer.

The yen dollar exchange rate hit a low point of 247.20 to the dollar early in September but has recovered to around 233 to the dollar, largely it seems, on expectations about U.S. short-term interest rates, which are expected to soften.

Officials at the Bank of Japan have refused to admit that the Bank is actually considering a cut but have admitted priority might be given to domestic considerations in formulating interest policy if the exchange rate seems likely to remain steady.

Mr Tomomitsu Oba, the Finance Ministry's Vice-Minister for International Affairs, said the Bank would probably start considering an interest rate cut.

Japan Inc is the guest of honour at a three-pronged symposium-cum-high-technology exhibition, Synergium 83, taking place at Liège, Belgium, Maastricht, the Netherlands and Aachen, West Germany. Its purpose is to look at co-operation between Japan and Europe in the new industries such as biotechnology, information technology and new materials. Page 6.

Genscher fails to alter Soviet missile stand

BY JAMES BUCHAN IN VIENNA

A LAST-DITCH West German attempt to budge the Soviet Union from its position at the Geneva medium-range nuclear missile talks failed yesterday after more than 11 hours of discussions between the two foreign ministers in Vienna.

Herr Hans-Dietrich Genscher, the West German Foreign Minister, said yesterday that Mr Andrei Gromyko, his Soviet counterpart, had insisted throughout the weekend of talks that Nato should not deploy its own medium-range missiles in Europe and that the British and French independent deterrents must be counted as part of the West's arsenal

The meetings between the longest serving foreign ministers of the respective alliances is the last planned before the current round of U.S.-Soviet medium-range missile talks is due to recess in November. Failing results by then, Nato will carry out a 1979 decision to deploy up to 572 missiles in Western Europe.

Speaking at a press conference in Vienna yesterday, Herr Genscher said that Mr Gromyko had made clear that the Soviet Union would take appropriate military "steps" to tackle the Western deployment, which was designed by Nato in 1979 as a stick with which to beat the Soviet Union to reduce its SS-20 force.

However, Herr Genscher said that he had gained the "firm impression" during the gruelling weekend of talks that Moscow was still "considering seriously" whether or not to break off participation in the Geneva negotiations when the West begins deployment. Last week's Warsaw Pact meeting in Sofia issued a communique which linked continued participation to the West forgoing deployment.

The Vienna meetings, which were originally to have taken place in New York in September, have provoked intense interest in West

Continued on Page 20

Protest goes on

West German Protestant pastors spoke out yesterday in church services against the stationing of new American nuclear missiles on German soil. Demonstrations were held outside U.S. military installations in West Germany and, for the first time, in West Berlin. Some 20,000 supporters took part on Saturday in the Bremerhaven rally. **Page 20**

Thatcher bid to boost position with reshuffle

BY PETER RIDDELL, POLITICAL EDITOR, IN LONDON

MRS MARGARET THATCHER, the British Prime Minister, last night attempted to strengthen her position with a cabinet reshuffle, made necessary by the departure last Friday of Mr Cecil Parkinson as Trade and Industry Secretary following further disclosures about his affair with his former secretary.

Mr Norman Tebbit, the Employment Secretary, is to become the new Trade and Industry Secretary, while Mr Nicholas Ridley, a strong supporter of the Prime Minister's economic views, becomes Transport Secretary.

Mr Tebbit's previous post will be taken by Mr Tom King, until now the Transport Secretary.

Mr Ridley, a newcomer to the Cabinet at 54, has been Financial Secretary to the Treasury, and his successor will be announced in the next couple of days.

Mrs Thatcher had two priorities in making the moves. First, she wanted to minimise the number of changes following the major reshuffle in June after the general election. Second, she was keen to preserve the political balance of the Cabinet following the departure of Mr Parkinson, one of her main supporters.

The moves announced last night ensure that the key economic posts remain with ministers sympathetic to her approach. That is why she again kept outside the Cabinet respected ministers like Mr Kenneth Baker, the Minister for Information Technology, who would not be certain supporters.

The attraction of switching Mr Tebbit to Trade and Industry is that he already has experience of the two constituent departments when they were separate, as a junior minister from 1979 to 1981. He is also firmly committed to the privatisation programme and cutting back state aid to industry.

This move is despite the recent start by Mr Tebbit of delicate negotiations with the Trades Union Congress. Mrs Thatcher apparently feels that these talks are at an early enough stage for a new man to come in. Moreover, the main lines of the forthcoming bill on internal union elections and political contributions have already been agreed.

Mr Tebbit will face immediate decisions on regional policy, on the pace of privatisation, notably in BL, the state-owned car group, and on the bill to exempt the London Stock Exchange from proceedings under the Restrictive Practices Act.

Mr King will have the rare distinction of holding four ministerial posts in under a year – first Minister for Local Government, then Environment Secretary from January until the election, and Transport Secretary in June.

Yesterday's move shows that the June switch was not intended as demotion. He is believed to have impressed Mrs Thatcher with his handling of the water industry dispute earlier this year and with his zeal for privatisation in recent months. Mr King is not identified with any particular group within the Cabinet and his conciliatory and affable manner will be important in the talks with the unions.

Mr Ridley has been a longstanding opponent of state intervention in industry, dating back over a decade. Before the 1979 election he was the main author of a report on sell-

Continued on Page 20

Reshuffle details, Page 8

Weser yard closure costs 2,300 jobs

BY JOHN DAVIES IN FRANKFURT

THE LARGE West German shipyard of AG Weser at Gröpelingen in Bremen is to be closed at the end of this year, with the loss of about 2,300 jobs.

The decision will shut the gates on 138 years of shipbuilding at Gröpelingen, a once-proud yard whose fortunes have steadily sunk *in post-war years.*

Shipyard workers staged a week-long sit-in at AG Weser on the eve of the Bremen state elections last month, after plans to close the yard became known.

The plans, however, were approved at the weekend by the supervisory board of AG Weser, which is largely owned by the Krupp steel concern. Workers' representatives on the board voted against the move.

The decision is the latest in a chronicle of misfortunes marking the decline of the West German shipbuilding industry.

About 54,000 workers have jobs at West German shipyards, 30,000 fewer than 10 years ago. They delivered only 3.7 per cent of the world's new shipping tonnage last year, compared with 17 per cent in the mid-1950s.

The slump in world shipping over the past few years has brought the crisis to a head for the West German shipyards. They have found it increasingly difficult to compete with yards in Japan, South Korea, Brazil and Spain.

The closure of AG Weser's Gröpelingen yard was proposed as part of a restructuring and merger of shipbuilding operations in Bremen and Bremerhaven.

The shipyard closure provides a major problem for Bremen, where unemployment is already high.

RepublicBank pays $51m for insolvent Texas bank

BY PAUL TAYLOR IN NEW YORK

FIRST National Bank of Midland, one of the largest independent banks in Texas was declared insolvent by federal bank regulators at the weekend because of its troubled energy loans. The bank will reopen today as a subsidiary of RepublicBank Corporation of Dallas.

First National, with $1.4bn in assets, is the second largest U.S. commercial bank failure. The largest was Franklin National Bank of New York, which was declared insolvent in 1974. First National's failure, together with that of Oklahoma City's Penn Square Bank last year, highlights the difficulties faced by the energy sector and its lenders.

The decision of the Comptroller of the Currency to declare First National insolvent came after a failed rescue effort prompted by a run on the bank's deposits. This occurred after First National's revelation 10 days ago that it had a net loss of $120.8m in the first eight months of the year, almost wiping out its equity. At mid-year, it had $314m in non-performing energy-loans – a quarter of its total loan portfolio.

On Wednesday last week, the Federal Deposit Insurance Corporation (FDIC) made a $100m emergency loan to First National to help keep it solvent and announced that it was seeking a potential buyer for the bank. The FDIC's action came after the Federal Reserve Bank of Dallas had already loaned First Midland more than $600m.

The federal agency's intervention failed, however, to halt a run on the bank's deposits, which fell from $1.47bn at mid-year to $622m at the end of last week.

RepublicBank, which was the 21st largest bank in the U.S., with $17.2bn in assets at year-end, is paying $51.1m for First National, which will reopen today as RepublicBank First National Midland. Depositors will have their accounts automatically transferred to the new subsidiary.

Effectively, RepublicBank is buying only the failed bank's name and customer relationships. The Dallas bank will assume responsibility for the remaining First National deposits and about $200m in assets.

Under the deal the FDIC will assume control of the bulk of First National's assets, including its troubled energy loans, but the federal insurance agency will have limited its liability to pay off First National's *estimated 76,000 depositors.* The FDIC will also assume responsibility for the $664m in loans advanced by the Federal Reserve Bank of Dallas earlier this year.

As part of the deal, the FDIC is expected today to lend RepublicBank $302m in cash to help it meet its new liabilities.

CONTENTS

Rise in French inflation threatens wage policy

BY DAVID HOUSEGO IN PARIS

FRANCE'S inflation rate accelerated in September, threatening both the Government's wages policy and the stability of the franc.

According to provisional figures released over the weekend, prices rose by 0.7–0.8 per cent in September and were thus up by 10–10.01 per cent over the year. The September figures compare with an already high 0.6 per cent in August and mean that the cumulative price increase for the first nine months of the year is now 7.5 to 7.6 per cent.

The Government had set a target, on which wage settlements have been based, of bringing inflation down to 8 per cent by the end of the year. This was subsequently revised to 8.5 per cent.

M Jacques Delors, the Finance Minister, conceded at the weekend that the September figures were "bad". He said: "We have not won the battle of the 8 per cent but we will win the fight against inflation."

M Jacques Delors: 'bad' figures

The figures are the more worrying in that the renewed pick-up in inflation comes at a time when there are still extensive price controls in force in industry and more particularly in the service sector. It is bound to increase the pressure on the Government to tighten the controls further or to adopt fresh anti-inflationary measures to prevent more substantial wage demands and a further weakening of the franc.

After remaining virtually unchange against the D-Mark since the March devaluation, the French currency slipped early this month to below its midway point in the EMS. It recovered last week as the dollar strengthened thus leaving the D-Mark weaker. But with the gap between the French and German inflation rates now about 7 percentage points the franc is vulnerable to any further fall in the dollar.

Offsetting the impact on the currency of the poor inflation figures has nonetheless been a far sharper than expected improvement in the trade and current account deficit. The trade deficit is now expected to be under the target of FFr 60bn ($7.54bn) this year. With the sharp increase in tourist receipts, officials say that the current account on a seasonally adjusted basis could move into surplus in the fourth quarter.

The Goverment's major anxiety now is that the inflation rate for the year will pass 9 per cent. If this should happen it would trigger union demands for an additional pay increase this year to make good a loss in purchasing power based on an 8 per cent target inflation rate. It would also virtually rule out any chance of lowering the level of wage settlements next year to 5–6 per cent as the Government has hoped.

M Delors said at the weekend that the increase in inflation had been due to the strength of the dollar pushing up import prices.

HONG KONG DOLLAR

Market to make judgment on new measures

BY ALAIN CASS, ASIA EDITOR

THE HEADLINE in one Hong Kong newspaper yesterday morning following Saturday's announcement of measures to shore up the territory's sinking currency, read hopefully "U.S. peg to shore up our dollar."

The measures — fixing the fates of notes in circulation at HK$7.80 to one U.S. dollar and scrapping the local tax paid on Hong Kong dollar deposits — were billed by the Government as "a fundamental change of the framework within which the currency will operate."

Mr Tony Latter, the Territory's Deputy Secretary for Monetary Affairs, added with gusto, "The Government is not making a commitment which it is not 100 per cent confident of being able to back."

Whether that view is widely shared will have to wait until this morning when the markets open for business. What is not in doubt is that the moves represent a major departure from existing policy and a complete turnabout from the views held by Sir John Bremridge, the Financial Secretary, only a few weeks ago.

Then, he and others were saying that the only solution to the demoralising decline in the value of the Hong Kong dollar in the face of uncertainties over the Territory's political future was to let market forces work things out. It was widely argued that the root of the problem was not in Hong Kong (whose economy is picking up strongly) but in Peking where ill-considered statements about Hong Kong's future after 1997, when the lease of much of the Territory runs out, were making a bad situation worse.

What appears to have changed the Government's mind is, quite simply, that matters were beginning to get out of control and something had to be done.

The Government began to worry seriously around the end of August but the crunch appears to have come between September 19 and 24 when the currency went from a rate of HK$8.10 to the U.S. dollar to HK$9.65 to the U.S. dollar. On September 24, to the Government's horror, it lost 10.3 per cent in three hours' trading.

The loss since last year's visit to Peking by Mrs Margaret Thatcher, the British Prime Minister, marking the start of the present phase of talks with China, has been of the order of 30 per cent.

Said Mr Latter yesterday, "the depreciation was beginning to feed on itself. We decided that the consequences in terms of inflation, prices and social unrest were unacceptable."

The authorities therefore decided to abandon floating exchange rates for a fixed rate, reverting to the system as it existed prior to 1974, when it was pegged to the U.S. dollar after leaving the sterling area in 1972.

An additional factor which probably decided the timing of Saturday's announcement was this week's next round of talks in Peking over the colony's future. Britain has been accused of fuelling the dollar crisis by not announcing support measures to demonstrate to Peking that a Chinese takeover is not welcomed by Hong Kong.

Of the many options available to it to arrest the flight of the local currency, the Government has apparently rejected three of the more radical ones: imposing foreign exchange controls because that would undermine Hong Kong's image as a free market; imposing stringent reserve requirements on banks in the Territory, finally creating a central bank to manage the crisis.

Before today's new measures the Territory's two note-issuing banks (the Hongkong and Shanghai Bank and the Chartered Bank) had to deposit one Hong Kong dollar in the Government's exchange fund for every one dollar note issued. Under the new system they will have to deposit foreign exchange in return for certificates of indebtedness, which the Government will guarantee to buy back at the rate of HK$7.80 to the U.S. dollar.

The Government's exchange fund is held by the Hong Kong bank. The Chartered Bank also holds it account there. Officials therefore argue that while there may not be a "lender of last resort" in the shape of a central bank, the Hong Kong dollar does have a "final resting place" which serves the same practical purpose. In addition the Government will back the currency at a favourable fixed rate.

The theory behind Saturday's move is that investors will be reassured and they will gradually stop selling the currency.

But while most bankers and brokers yesterday welcomed the move as "brave" or "sensible" and "timely" they are not entirely reassured. They point to several potential weaknesses:

- The guarantee of HK$7.80 for US$1 only applies to notes in circulation and those account for no more than 10 per cent of overall money supply.
- The fixed exchange rate only applies to transactions between the Government and banks and will not necessarily affect foreign exchange dealings. Some brokers forecast a widening gap between this rate and the market rate.
- The government could be faced with a massive support bill if people decide to convert even a part of the HK$150bn on deposit to notes in order to then exchange them for the pledged rate of HK$7.80 to the U.S. dollar.
- The abolition of the tax on Hong Kong dollar deposits will have little effect in the medium-term as institutions were depositing more and more off-shore (in Macau, for example) to legally avoid paying the tax.

In the final analysis, however, most sceptics in this volatile market wondered whether economic remedies for a patient afflicted by a political disease would do much more than provide a temporary relief.

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OVERSEAS NEWS

Search for Aridor successor fails

BY DAVID LENNON IN TEL AVIV

THE SEARCH for a new Israeli Finance Minister continued yesterday as virtually the nation's entire workforce staged a two-hour warning strike against any attempt by the Government to tamper with existing wage agreements.

Against the background of the current economic crisis, Mr Yitzhak Shamir, the Prime Minister, pursued his strenuous efforts yesterday to find an acceptable and willing replacement for Mr Yoram Aridor, who was forced to resign from the Treasury last Thursday.

His first choice, Mr David Levy, the deputy Premier, has refused to take over the Treasury portfolio because this job is generally regarded as a graveyard for the politically ambitious. The alternative choice of Mr Yitzhak Modai, the Energy Minister, has so far been stymied by inter-party rivalries.

The two-hour warning strike called yesterday by the Histadrut, the trades union federation, closed down schools, industries, public services, ports and the broadcasting services.

This modest display of union militancy served notice on whoever becomes the new Finance Minister that any attempt to cure the country's economic ills will require the co-operation of the labour force if it is to have any chance of succeeding.

In the meantime, the continued closure of the Tel Aviv stock market is causing serious liquidity problems for thousands of businesses. Despite growing pressure for the resumption of trading, this is unlikely to take place until the details are finalised on the government's support programme for bank shares, which came under heavy selling pressure earlier this month.

The Cabinet yesterday appointed a sub-committee to approve the details of the plan designed to prevent the collapse of bank share prices.

Greece, Italy to police Lebanon ceasefire

BY NORA BOUSTANY IN BEIRUT

THE LEBANESE Government moved closer to implementing conditions of a three-week-old ceasefire at the weekend, by formally asking Greece and Italy to contribute troops to a truce observation force.

Both countries last week said they were willing to join. Lebanese officials said Greece and Italy will send 400 men each to Lebanon.

Their mission will be co-ordinated by a security committee grouping the Lebanese Army, the Shi'ite Amal organisation, the mainly Druze Progressive Socialist Party, and the Christian Lebanese Forces Militia.

The Greek and Italian soldiers will be positioned along confrontation lines in the capital's suburbs and the hills south-east of Beirut

The decision on the membership of the supervisory force, which has to be neutral, was one of the last conditions of a U.S. and Saudi-mediated ceasefire declared on September 25.

One other unfulfilled condition is the beginning of a national reconciliation dialogue, scheduled for October 20. Final agreement has yet to be reached on the venue of the discussions.

Meetings of the security committee were temporarily suspended last week following objections by Amal to the severance in pay of Shi'ite army soldiers who failed to report for duty last month. The Amal leader, Nabih Berri, said on Saturday, however, that the issue had been settled.

Syrian-backed Druze opposition fighters fired at Lebanese Army positions in the strategic mountain stronghold of Souk Al Gharb yesterday as Christian and Druze militiamen exchanged artillery and machinegun fire in the Southern Chouf.

Christian militiamen have been trying to stem advances by the mainly Druze PSP militia and their allies in what is known as the Iqlim Al-Kharroub region, to stop them reaching the coastal road.

Both groups have been launching attacks and counter-attacks against one another in the mainly Christian-Sunni Moslem area, for the past four days.

In the southern market town of Nabatiyeh yesterday, eight people were wounded when Israeli troops fired on Shi'ite Moslem worshippers

An Israeli patrol opened fire as it confronted crowds in the town centre. The crowds reacted by hurling stones

Grenada's Prime Minister 'under house arrest'

BY OUR FOREIGN STAFF

MR MAURICE BISHOP, the left-wing Prime Minister of Grenada, was reported to be under house arrest after an apparent coup over the weekend, but there was no clear indication last night of who was in charge of the Caribbean island's government.

The Caribbean News Agency (Cana), some of whose reporters were expelled from the island over the weekend, reported that Major Liam Cornwall, Grenada's Ambassador to Cuba, said Mr Bishop had failed to accept and implement decisions of the ruling New Jewel Movement

Cana added that Mr Kenrick Radix, a member of Mr Bishop's Cabinet, told a group of demonstrators that the Prime Minister had been detained since last Thursday.

The news agency also said that Mr Bernard Coard, the Deputy Prime Minister, had resigned last Friday to refute "vicious rumours" that he had tried to unseat and kill Mr Bishop in a move to carry the Government further to the Left.

Andrew Whitley in Rio de Janeiro writes: The weekend's apparent coup against Mr Bishop brought to a head tensions which have been growing for some time in the tiny Caribbean island over the speed with which it should be moving towards a full Socialist economy.

Mr Coard is known to have favoured a faster expansion of the state sector, particularly in commerce, which is dominated by profitable, locally-owned private companies.

The chief ideologue in the New Jewel Movement, which seized power in March 1979, Mr Coard has also been the key figure behind Grenada's growing economic links with the Soviet Bloc.

Brazil hopes Japan will join in loan package

BY ANDREW WHITLEY IN RIO DE JANEIRO

BRAZILIAN officials are turning their attention to their official creditors, now that the drive to secure commercial bank participation in the latest \$11bn (£7.3bn) rescue package is well under way.

Talks are reported to have started with officials from Japan, West Germany, and France on new credits and loan guarantees to match the \$1.5bn already promised by the U.S. Eximbank.

Particular hope is being pinned on the Japanese Eximbank as a potential major contributor to the foreign government package of assistance.

Brazil hopes to obtain preliminary commitments from these governments within the next few weeks, prior to the Paris Club creditors' meeting in the first half of November.

According to leaked copy of Brazil's application to the Paris Club, for negotiations on the rolling-over of 17 months of official debt falling due between August this year and the end of December, 1984, the Brazilian Government has asked for 90 per cent of the payments to be rescheduled over nine years, with a four-year grace period.

The remaining 10 per cent Brazil wants rolled over for five years, including three years' grace. In all, it is asking for the refinancing of \$2.26bn out of the \$7.85bn it owes official agencies.

● Leading bank creditors agreed at the weekend to suspend repayments on the Philippines' \$18bn (£12bn) foreign debt, our Foreign Staff writes. The 90-day suspension of principal repayments is to take immediate effect, as a prelude to full-scale rescheduling negotiations.

Argentine Air Force opposes debt moves

By Jimmy Burns in Buenos Aires

THE ARGENTINE Air Force yesterday reaffirmed its opposition to the rescheduling of any further public sector debt before the October 30 elections.

The move came amid reports in Buenos Aires that Argentina was preparing to complete at least two of the 30 public sector debt contracts still outstanding as part of a compromise agreement with foreign banks.

On Friday the Argentine central bank announced that the country's creditors have agreed to disperse the first instalment of a \$1.5bn (£1bn) loan package. Drawndown of the first \$500m instalment will be on October 28 — two days before the Argentine election and not today as originally scheduled.

In Friday's announcement there was no official reference to the public sector contracts, worth an estimated \$6bn. However, the Air Force's announcement is a reminder of the intense pressure the Government is facing from nationalist sectors within the military, and the political parties on the debt question.

Sr Italo Luder, the Peronist Presidential candidate, said over the weekend that his party would honour Argentina's debt obligations but emphasised that his government would be seeking better terms when some \$10bn of payments fall due in 1984.

The Air Force said that by postponing the rescheduling of the debt, Argentina would eventually be in a position to request a decrease in interest and a longer repayment schedule as obtained recently by Brazil. The Air Force suggested that a reduction of ½ per cent in interest could have Argentina \$400m a year, the equivalent of 10 per cent of exports.

Bourassa to lead Quebec Liberals

MR ROBERT BOURASSA, 50, Premier of Quebec from 1970 to 1976, swept to victory at the Quebec Liberal Party leadership convention on Saturday, winning 75 per cent of the nearly 3,000 delegate votes, Robert Gibbens writes from Montreal. Mr Bourassa had been expected to win the leadership by a large margin.

Gandhi calls in the army to deal with extremists

By K. K. Sharma in New Delhi

THE INDIAN Government is preparing to bring in the army to deal with suspected Sikh extremists in the north-western state of Punjab.

Following a wave of bomb attacks in Punjab and in New Delhi over the past few days, the Government has given special powers to the army to take whatever steps necessary to deal with the extremists. The army has not yet been asked to take over law and order duties but this move is thought to be imminent.

Mrs Indira Gandhi, the Prime Minister has toughened her stand on the Punjab issue and said she will take no further initiative to resolve the crisis unless the Sikh Akali Party disassociates itself from the activities of extremists and terrorists, and gives up its policy of confrontation.

Security measures have been tightened in Punjab and the neighbouring state of Haryana as well as in New Delhi following a number of grenade attacks on cinemas, at public gatherings and in religious centres. Until recently the suspected Sikh extremists had carefully picked their targets rather than making indiscriminate bomb attacks, as is now the case.

Special squads have been formed to deal with the unidentified terrorists but, in the meantime, there are near panic conditions in the troubled areas.

Mrs Gandhi has severely attacked opposition parties for failing to condemn the Sikh extremists and claims that their object was to oust her from power. She has not yet reacted to a suggestion for an emergency session of Parliament, which is now in recess.

The Sikh Akali Party has decided to continue agitating for more autonomy for Punjab and special privileges for Sikhs to practise their religion, but there are indications that its leadership is sharply divided and that the extremists are gaining control of the party.

OVERSEAS NEWS

Brazil property market shows good prospects

BY PAUL HANNON, RECENTLY IN SÃO PAULO

CHANGE IN Brazil is a function of inflation. What might take five years in Europe will occur much faster in a country with annual inflation over 100 per cent. Thus Mr Anthony McVeigh, head of Richard Ellis in São Paulo, describes one of the most dynamic South American economies where over the past two decades the Brazilian property market has come of age, but with major differences from either the U.S. or Europe.

Prime office prices in São Paulo and Rio de Janeiro are currently much lower than in any other city in the world with more than 2m residents, according to Mr McVeigh. It is possible, he argues, that the Brazilian market, despite its current debt problems, will attract international investors in the near future which would increase real capital values without necessarily affecting rental values.

"Another major difference is the absence of a significant capital market, while development finance has virtually dried up," he says, emphasising the implications for supply, demand, speed and quality of construction.

"Despite this, there is amazing potential in both São Paulo and Rio de Janeiro – the only two important property concentrations in Brazil," he says.

"Whereas foreign interest is currently limited to multinational corporations (owner/occupiers) and some Middle East fund transfers, European and North American interest is expected to grow. International investors with overseas portfolios in excess of $100m could acquire in São Paulo 4,000 square metres of useful office space in a well located superior building through a sale and lease back for about the same price as 600–800 sq m in London or perhaps as much as 1,000 sq m in New York. So if an investor needs to even up his portfolio in square metre terms, São Paulo's prices are cheap.

"Many asking prices for property bear no relation to reality. The current realistic price for net us able office space is between $780–$930 per sq m. One recent transaction worked out at $3,450 per sq m, but this is not representative of what the market can support," says Mr McVeigh.

Rents for basic accommodation start at Cr 5,800 ($7.7) per sq m per month of net useful office space and range up to Cr 3,850. The current unoccupied space available on the São Paulo market amounts to approximately 225,000 sq m out of a total market stock of only 2.15m sq m. This can be further broken down into:

- 79,000 sq m in the highly developed banking and commercial focus of Av. Paulista
- 37,000 sq m in the mixed residential/office area of the Jardins a[illegible] cent to Av. Paulista
- 88,000 sq m available in the [illegible] centralised Marginal district. [illegible] city centre has seen few deve[illegible] ments recently; although deman[illegible] good, rents are relatively low [illegible] accommodation is generally old [illegible] uneconomic.

Leases are rarely longer than [illegible] years, and rent adjustments ba[illegible] on a widely used government in[illegible] occur every six months.

"Yields on prime properties ar[illegible] excess of 8 per cent per annum [illegible] will probably rise in the short-t[illegible] but fall back in the longer term," McVeigh says.

Richard Ellis identifies other [illegible] portant factors characteristic of [illegible] Brazilian market as:

- Because of the absence of a [illegible] ditional capital market, there is [illegible] finance currently available [illegible] property development. Governm[illegible] involvement in a house buil[illegible] programme tied to office devel[illegible] ment ceased in 1976, leaving h[illegible] amounts of office space availabl[illegible] Rio de Janeiro. The Governmen[illegible] unlikely to repeal the experienc[illegible]
- Owner/occupiers represent a[illegible] 50 per cent of the market, and "[illegible] ing freeholds" make large site [illegible] velopments difficult to assemble.
- Rio de Janeiro is currently o[illegible] supplied with offices and for [illegible] first time in memory is chea[illegible] than São Paulo. Hotel developm[illegible] in Rio has good prospects, with [illegible] erage occupancy rates standing [illegible] 85 per cent.
- Retail shopping has seen la[illegible] shopping centre developments [illegible] with mixed results for both inv[illegible] tors/occupiers. Traditional "h[illegible] street" commercial property is [illegible] the best investment but it is still [illegible] sentially a local market.
- Rehabilitation/refurbishment [illegible] does not exist.
- The new metro systems in [illegible] Paulo and Rio have boosted l[illegible] values along their routes.
- Zoning regulations limit devel[illegible] ments to a maximum of four ti[illegible] the area of land, although the [illegible] mal ratio is 1:1. Buildings are f[illegible] quently overloaded with only 4 s[illegible] space per person. Car parking [illegible] quirements are one space per 5[illegible] m office area.

"Our inflation forces us to [illegible] amine every cost element o[illegible] sometimes twice a month. Busin[illegible] opportunities spring up overnig[illegible] It's exciting to be in contact with [illegible] much activity every day; it can a[illegible] be very profitable," Mr McVe[illegible] says.

In essence, Brazil is a develo[illegible] market, growing in opportunit[illegible] scale and complexity. It has su[illegible] cient internal impetus to cont[illegible] through several decades, but [illegible] international attention focuse[illegible] this market, the prospects are s[illegible] gering.

STATISTICAL TRENDS: ENERGY

Change in patterns of energy industry create uncertainty

A FALL in total energy requirements, oil consumption and price, together with a ratio of oil consumption-to-reserves of 32 years' supply, has left even the world's energy experts unsure as to whether or not there is an energy crisis.

Much of the fall in consumption in 1982 can be attributed to the economic decline, particularly the decline in the industrial sector with its heavy demand for primary energy. The decline is compounded by substantial falls in the production of crude steel and aluminium, both of which industries are major energy consumers.

Demand

A return to economic growth, particularly in the industrial sector, could lead to a return to growth in demand for energy. But there has been a weakening of the historical relationship between economic growth and the demand for energy, in part reflecting differences in the growth rates of major sectors—industry, transportation—and, in part, the effect of energy conservation measures.

As regards oil, the situation is made more complex by the switch to alternative fuels. The previous ten years have seen solid fuels and nuclear power increase their share of energy requirements at the expense of oil. The share of coal is expected to grow further, with natural gas maintaining its current share of 20 per cent.

Nuclear power could grow from its present share of about 4 per cent, but not substantially, and new energy sources such as wind and solar power are unlikely to make a significant impact.

Consumption

In 1981-2, following the *general fall in the demand for* oil, Opec's share of supply fell to below 50 per cent, down to 44 per cent in 1982. Both North America and Europe reduced their dependence on Opec considerably, but exports from Opec continue to be a dominating factor in these regions' imports.

North America is effectively *self-sufficient* in coal, whereas Europe imports from a variety of sources, with 40 per cent of imports from the U.S.

Commentary by Our Economics Staff; data analysis by Financial Times Statistics Unit; charts and graphs by Financial Times Charts Department.

Oil consumption is likely to increase in industry and transport, but its share of energy needs is expected to decline. The price advantage currently enjoyed by coal could lead to expansion in production and use, but natural gas is unlikely to increase its share.

Faced with changing patterns of use in the energy industry, the differences in relationships between producers and consumers and the greater variety of fuels in use over the last decade, experts find trends almost impossible to predict at present.

OIL PRICE RISES AND INFLATION

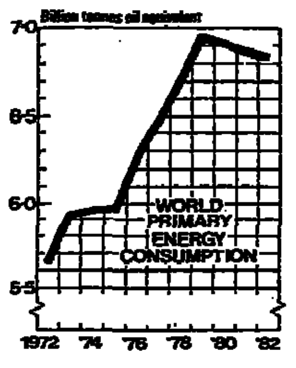
Impact of higher oil price in inflation

(% increase over base period)

Oil price ($/b)	U.S.	Japan	Germany	France	UK	OECD
29	—	—	—	—	—	—
32	0.7	0.5	0.5	0.7	0.5	0.6
34	1.2	0.8	0.8	1.2	0.8	1.0
38	1.9	1.3	1.3	1.9	1.3	1.7
40	2.3	1.7	1.7	2.3	1.7	2.1
50	4.7	3.3	3.3	4.7	3.3	4.2

Source: Simon and Coates

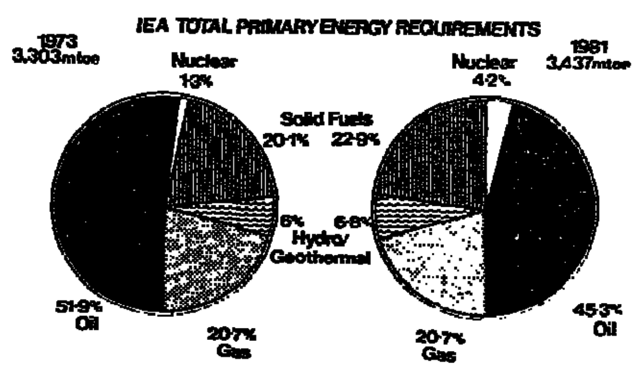
General



IEA COUNTRIES GROWTH RATES (% per annum)

	1973-80	1980-81	1981-82
Total primary energy	0.9	− 2.1	− 3.5
GDP	2.4	1.6	− 0.6
Net oil imports	−1.6	−13.4	−15.0

Source: IEA



ENERGY INTENSITY

Percentage changes in energy intensity*

	1973-78	1978-82	1973-82
Industry			
U.S.	−12.1	−23.5	−32.8
Germany	−20.4	−25.9	−41.0
UK	−20.8	−28.7	−43.5
Japan	−11.6	−22.2	−31.2
Transportation			
U.S.	1.5	−16.7	−15.4
Germany	7.6	− 1.9	5.6
UK	− 0.1	− 1.6	− 1.7
Japan	3.3	−13.4	−10.5

* Final energy demand divided by real GDP.

Source: OECD

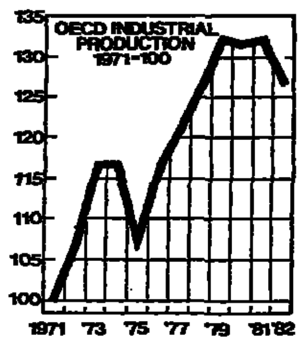
Trade

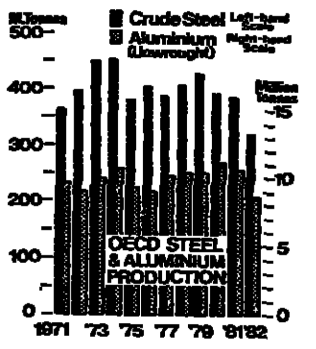
GROWTH, INFLATION, AND OIL PRICES

Year	Real GNP/GDP growth	Inflation	Oil price
1973	6.1	7.3	3.37
1974	0.7	12.5	11.25
1975	−0.2	10.2	11.02
1976	4.8	7.8	11.89
1977	3.8	7.8	12.95
1978	4.0	7.0	12.98
1979	3.1	8.4	19.00
1980	1.2	10.7	31.51
1981	1.6	9.5	35.01
1982	−0.2	7.5	32.60
1983*	2.0	5.7	29.35

* Forecasts

Source: OECD





Oil

WORLD OIL PRODUCTION/CONSUMPTION (m b/d)

Year	Production: Total	Production: Excl. USSR, China, E. Europe	Consumption: Total	Consumption: Excl. USSR, China, E. Europe
1972	53.5	44.2	52.8	44.4
1973	58.5	48.3	57.0	47.9
1974	58.6	47.6	56.4	46.3
1975	55.7	43.9	55.7	45.2
1976	60.1	47.5	59.2	48.0
1977	62.6	49.2	61.3	49.5
1978	63.1	48.9	63.1	50.9
1979	65.8	51.4	64.1	51.6
1980	62.7	48.0	61.6	48.9
1981	59.1	44.4	60.1	47.3
1982	56.2	41.3	58.5	45.7

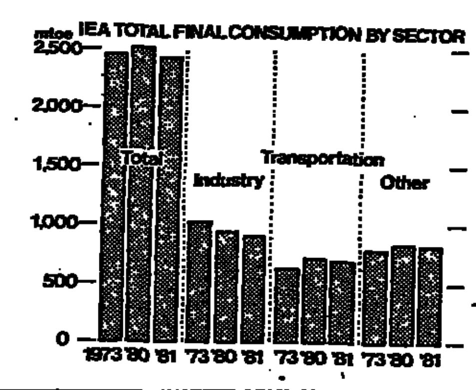
Source: BP Statistical Review

WORLD OIL SUPPLY AND DEMAND (m b/d)

Demand	1979	1980	1981	1982
OECD	41.6	38.8	36.5	35.1
Other	10.4	10.8	11.2	10.9
Total	52.0	49.6	47.7	46.0
Non Opec oil prod.	21.6	22.1	23.0	24.3
Additional needs	30.4	27.5	24.7	21.7
Opec production	31.6	27.6	23.5	19.7
Stock draw (−) or addition (+)	+ 1.2	+ 0.1	− 1.2	− 2.0

Source: IEA

Sectoral



EEC: ENERGY CONSUMPTION INDICATORS (MTOE)

	1973	1979	1981	% change 1973/1981
Industry				
Final consumption	248	238	210	−15.3
% share	39	35	34	
Transport				
Final consumption	128	152	152	+18.8
% share	20	22	25	
Household/tertiary	265	286	255	− 3.8
% share	41	42	41	

Source: EEC

PROJECTED ENERGY CONSUMPTION

IEA Countries (MTOE)

	1980	1981	1985	1990
Total final consumption	2,522	2,446	2,681	2,898
Industry	951	910	1,175	1,320
Transport	722	703	716	717
Other sectors	849	835	790	860

Source: OECD/IEA

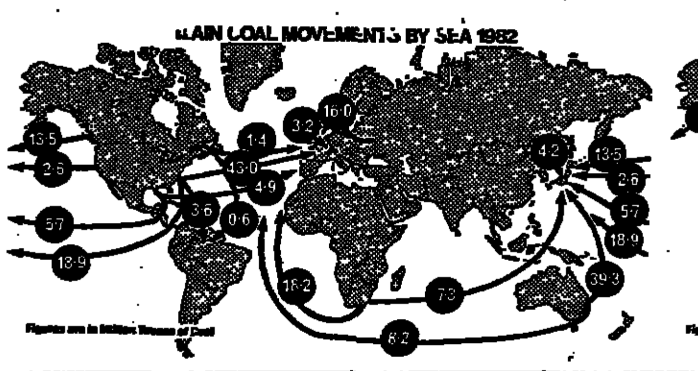
Trade

OIL TRADE (% shares)

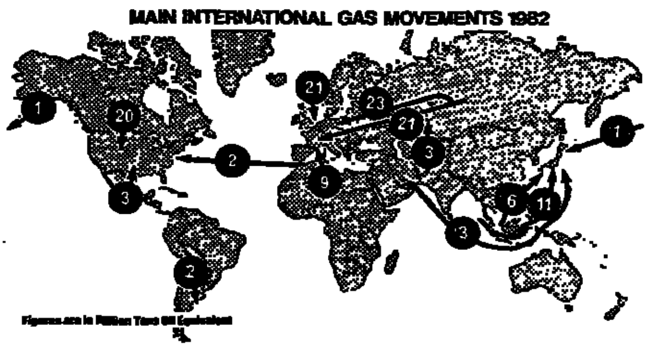
Importers	Exporters: Opec	CPE	Europe	Others	Total
North America					
1980	67	—	5	28	100
1982	48	—	9	43	100
Europe					
1980	61	9	19	11	100
1982	49	11	23	17	100

Source: IEA

Coal



Gas



GAS (MTOE)

	World productn	World consumptn
1972	1,058	1,045
1973	1,108	1,076
1974	1,130	1,102
1975	1,132	1,090
1976	1,176	1,141
1977	1,218	1,166
1978	1,252	1,210
1979	1,339	1,278
1980	1,347	1,306
1981	1,380	1,327
1982	1,370	1,312

Source: BP Statistical Review

Reserves

OIL/GAS 1982

	Oil (million barrels)	Gas (bn cu metres)
Reserves	677,000	85,900
Consumption	21,356	1,453
Years of supply	32	59

Source: BP

WORLD TRADE NEWS

Algeria diversifies trade partners

BY FRANCIS GHILES

ALGERIA, long a bastion of French influence and trade, has fought quietly and hard-headedly in recent years to diversify its foreign trade partners.

Sweden and India, not countries one immediately associates with Algeria, are both active in this growing North African market.

It is not just the quality of goods and the price offered when tendering for contracts in Algeria which are the only factors which matter. Algeria likes to have "balanced" relations with most of its trading partners, so that more orders will be placed by Algerian state companies in countries which show a willingness to buy Algerian hydrocarbons

Hence the brief, unofficial visit paid on July 5 by two senior Swedish officials to their counterparts in Algiers to discuss ways of reducing the deficit incurred by Algeria in its trade with Sweden.

Despite the fact that Sweden has increased its purchases of Algerian oil tenfold since 1982, to SKr 481m (£41m) last year the deficit incurred by Algeria still stood at SKr 121m.

Swedish companies such as ABV and Ericsson have been active in Algeria for a number of years but, as they watch the country's booming building and telecommunications sectors, they know that if trade between the two countries is better balanced, they will be in a stronger position to pick up contracts.

Free trade is an expression which means little to senior Algerian officials. Up to 1971, when it nationalised French oil interests, Algeria had virtually no means of leverage with its dominant trade partner, France.

When France refused to buy Algerian wine, then a major hard-income earner for the newly-independent country, Algeria was forced into throwing it away, bartering it at very low prices to the Soviet Union and pulling up many of its vineyards.

The experience was sobering, so that when they started planning the development of their large natural gas resources a decade ago, the Algerians carefully avoided being too dependent on any one customer in Europe or North America.

The policy of diversifying their foreign partners was pursued through the 1970s to the point when France's share of Algeria's market had, by 1979, shrunk to 13.4 per cent.

The percentage this year will probably be over 25 per cent but French exports only gained ground after President Francois Mitterrand agreed, in January 1982, to purchase Algerian gas at a price 20 per cent above world market prices.

Last year, France incurred a FFr 11.9bn (£552m) deficit in its trade with Algeria. But as French order books fatten and the price of gas declines from $5.12 per million British Thermal Units 18 months ago to $3.98 today, France's deficit has been reduced to FFr 5bn in the first seven months of this year. Both countries expect a rough balance to be achieved by 1985.

The Algerians play a hard game with their immediate neighbours to the north of the Mediteranean but this has not deterred other countries from seeking contracts in Algeria: West Germany, Italy, Spain, the U.S. and Japan are all very active.

The UK has trailed far behind, but British companies such as Plessey, Tarmac, and Brook Marine have won contracts in the past two years.

With countries such as the UK and the U.S., which are not net importers of energy, the Algerians are less insistent on achieving balance. However, the trade balance with the U.S. is still in surplus to the tune of $2.5bn last year.

Last year was a much better one for the U.S. than ever before. Algerian exports to the U.S. were halved between 1979 and 1982, while U.S. exports to Algeria reached $1bn for the first time.

The second priority of Algerian planners can be broadly described as "transfer of technology." This implies that foreign companies wishing to do business in Algeria take a long view of the market, have a permanent representative in Algiers, and are willing to train local labour.

A quick kill is not the name of the game, as certain British companies discovered to their cost in the late 1970s.

The absence of a good local representative — Algerians are not allowed to act in such a capacity—can be very damaging, as Lancer Boss discovered when its man was poached by another company two years ago.

It took the company two years to find a replacement and the order book, which had considerably thinned is now looking healthier.

They have added a maintenance engineer, based in Algiers, as spare parts and repairs are vital to the success of future sales, and are also helping the local state company to manage its stocks.

Were the U.S. dollar to weaken next year, Algeria's trade position would also weaken, but that is unlikely to shake the conviction of a host of international companies who are fighting hard to gain, or maintain, a foothold in one of Africa's largest markets.

SHIPPING REPORT

Threat to rates

BY ANDREW FISHER IN LONDON

IRAN'S threat to blockade the vital Straits of Hormuz if Iraq receives its Etendard aircraft from France with Exocet missiles, sent a frisson through the tanker market last week, though rates showed little change.

Owners and charters are keeping a close eye on the situation, however, and it is clear that rates could rise sharply if supplies from the Gulf were disrupted.

The supply of big tankers in the region is not large at the moment, noted E. A. Gibson. Most active in the Gulf last week were Japanese charterers who have fixed VLCCs (Very Large Crude Carriers) at Worldscale 30½ and ULCC (Ultra Large) at Worldscale 27½, similar to rates in recent weeks.

South Koreans were also in the market, Galbraith Wrightson said. They paid Worldscale 33½ for a 240,000-tonne cargo from Kharg Island, the major Iranian terminal, while U.S. traders took a slightly larger volume at Worldscale 34.

Rates from Kharg Island have been a few points higher than from other Gulf terminals ever since the war with Iraq increased risks to shipping. But the marekts have become used to Iraqi claims and reports of damage to tankers.

Hence the absence of any marked moves in rates so far. It is thought unlikely that the Straits of Hormuz would be closed, "barring an unexpected catastrophe."

Fractionally higher freight levels were seen on the dry cargo market last week, reports Denholm Coates.

EEC aims to woo Japan

BY PAUL CHEESERIGHT IN BRUSSELS

THIS week, the harassed businessman might be hearing about the nature of his business in the future, the people who will be conducting it and the environment in which they will be working – all for £500 ($750).

The code word is synergy. The occasion is Synergium 83, taking place at Liège in Belgium, Maastricht in the Netherlands and Aachen in West Germany – a three-wheeled talk-in attached to a high-technology exhibition.

The buzzword is challenge. It came up frequently at last week's formal opening, assembling the great and the good of Continental business, the EEC and Belgian politics. The reason was the guest of honour, Japan Inc.

Within the theme of running the business of tomorrow, coming to terms with biotechnology, information technology and new materials, there is the question of co-operation between Japan and Europe.

In the 1930's, Europeans worried about textiles from Japan and how to penetrate the Japanese market. In the 1980s they worry about machine tools from Japan and how to penetrate the Japanese market.

Underlying the rhetoric at Synergium about the high technology business of the future was the knowledge that Japan is doing better than the Europeans and that if they cannot be beaten they had better be joined.

What better way to co-operate with Japan than have the Japan invest—and where better than Wallonia, the southern, French-speaking part of Belgium, of which Liege is the main city.

Wallonia was steel and coal. Now it is steel, and steel is contracting. So the interest of M Melchior Wathelet, the Walloon Minister of Technology is the industrial relaunching of an area which has fallen on hard times.

هكذا من الأصل

WORLD TRADE NEWS

Brazil company near stake in Alcoa project

BY ANDREW WHITLEY IN RIO DE JANEIRO

CAMARGO CORREA, Brazil's leading heavy construction and engineering company, is near final agreement with Alcoa on taking a major shareholding in a large aluminium project under construction at Sao Luis, in Maranhao State, on Brazil's north-east coast.

Negotiations on participation by the Brazilian company in the $1.5bn (£1bn) Alumar project, in which Alcoa has a 60 per cent interest, and Billiton, the metals subsidiary of Royal Dutch/Shell, has a 40 per cent, are expected to be concluded in Pittsburgh, Alcoa's headquarters, this week.

Under an outline agreement approved last week by the Brazilian Government, Camargo Correa is to invest $235m in the construction of a second 100,000-tonne aluminium line, doubling the smelter's initial capacity.

Alumar is due to come on stream in the middle of next year, with an initial production of 100,000 tonnes of aluminium and 500,000 tonnes of alumina. Work on the project is 75 per cent complete and proceeding on schedule, according to Alcoa.

Camargo Correa, which had earnings equivalent to $1.14bn last year and profits of $184m—making it Brazili's most profitable private company—will be diversifying into new territory with its stake in Alumar.

Iran-Danish cheese deal

BY HILARY BARNES IN COPENHAGEN

DANISH DAIRIES have received a DKr 1.5bn (£107m) order to supply Feta cheese to Iran, which, according to the Danes, is one of the biggest single contracts for food exports ever contracted.

The order is to supply cheese for the rest of this year and the whole of next year, and it was won in competition with Dutch and West German suppliers.

China buys vessels

SINGAPORE – The Wah-Chang International group said it had signed a S$22m ($10.35m) contract with the Bohai Oil Corporation, a subsidiary of China National Offshore Oil Corporation (CNOOC), for three new supply vessels.

Under the contract, Wah-Chang will sell three anchor-handling supply vessels of 4,800hp each to be delivered before the end of this year.

● Monier of Australia said it had secured a contract for the supply and installation of a prestressed concrete pipe-making plant a at Liaoyang in north-east China.

The contract involves the use of Monier Rocla technology for the manufacture of plant and equipment for making 2-5 feet diameter pipe.

Reuter

World Economic Indicators

FOREIGN EXCHANGE RESERVES (U.S.$m)

	Aug. '83	July '83	June '83	Aug. '82
UK	8,868	9,013	8,948	10,904
U.S.	6,660	7,270	7,850	9,050
W. Germany	36,714	38,214	37,692	36,094
Japan	20,238	20,748	20,502	20,568
Italy	18,107	18,579	16,963	14,772
Netherlands	8,722	8,944	8,880	6,977
Belgium	4,205	4,442	4,364	2,972
France	18,864	18,459	15,917	11,966

Source: IMF

New head for N. Sea operators' group

By Maurice Samuelson

THE TRADE association representing the large sector of British industry engaged in North Sea oil and gas developments is to have a new chief executive.

Mr George Band, 54, has been appointed director-general of the UK Offshore Operators' Association (UKOOA), representing 41 companies associated with offshore exploration and production.

He succeeds Mr George Williams, a former senior executive of Shell, who had held the post since UKOOA was formed in 1975.

UKOOA performs a wide range of technical and administrative functions as well as representing the offshore industry in its dealings with the Government and other organisations.

The change-over takes place at a time of accelerating development in the North Sea, with the Government beginning to authorise exploitation of a series of smaller oilfields.

Mr Band has worked on the exploration and production side of the Royal Dutch Shell Group, most recently as director of planning, government and public affairs with Shell exploration in the UK.

His predecessor had been UKOOA's driving force since it was formed. UKOOA's president, Mr Harry Sager, chairman of Conoco (UK), said yesterday that Mr Williams had made "a substantial contribution to the development of the offshore oil industry in this country."

Snamprogetti in Egypt deal

By James Buxton in Rome

SNAMPROGETTI, the construction arm of the Italian state energy corporation ENI, has won a contract for offshore oil production structures in Egypt.

The contract, whose value has not been disclosed, includes the building of five new platforms. It also covers the modification and expansion of equipment on three existing platforms.

Snamprogetti will manage the entire project and supply the equipment.

U.S. Eximbank cuts interest rates on Third World loans

BY NANCY DUNNE IN WASHINGTON

THE U.S. Export-Import Bank is reducing the interest rates it charges for medium- and long-term loans to intermediate and poor countries in accordance with a new rate schedule adopted on Friday by member-nations of the Organisation for Economic Co-operation and Development (OECD).

The new schedule has been seen to represent another coup for Eximbank's chairman, Mr William H. Draper, who had sought a system permitting an automatic semi-annual adjustment of export credit rates linked to Government borrowing.

In a statement released by Eximbank last Friday, Mr Draper said the new accord "should eliminate the inequities that have occurred in the past when government borrowing costs rose and fell while government lending rates for export credits remained fixed."

Mr Draper has also argued for a total elimination of subsidies in government-provided export credits. However, to get the automatic adjustments approved in the current system, he agreed to a slight increase in the cost of subsidies until July, 1986.

As a result of the new agreement, Eximbank will drop its interest rates on both long- and short-term loans to less developed countries from 10 per cent to 9.5 per cent.

For the intermediate countries, interest rates on short-term loans will drop from 10.85 per cent to 10.35 per cent and rates on longer-term credits will drop from 11.35 per cent to 10.70 per cent.

Rates charged for loans assisting sales to relatively rich countries will remain unchanged at 12.15 per cent, in accordance with the new guidelines.

The new OECD rates will be revised semi-annually to reflect changes in the average rates on government bond issues in SDR currencies.

Adjustments in the minimum rate schedule will be made in January and July of each year, if the average rate of government bonds in SDR currencies changes 50 basis points or more.

Until the October 15 reduction has been recouped, only one half of any such downward change in the average bond rates will be reflected in export credit rates.

The OECD member-nations intend to recoup the reductions made at this time by July 1986 at the very latest.

Taiwan pushes sales of floppy-disc drives

BY BOB KING IN TAIPEI

TAIWANESE small-computer manufacturers are going all out to export a major portion of world requirements for floppy-disc drives, and their efforts may push export prices below $100 by the beginning of next year.

Already, some makers of the popular 5¼-inch "Apple" add-on drives are selling them at export prices as low as $100. Manufacturers interviewed at the just-concluded Taiwan Electronics show displayed prototypes of advanced models they expect to have in production by the end of the year at similar prices.

There is every indication that Taiwan plans to become a major centre of drive-manufacturing. For instance, exports of 5¼-inch floppy drives rose from almost zero to 24,000 during the first half of this year.

UK NEWS

Svenska licensed to carry on business of deposit-taking

BY ALISON HOGAN

SVENSKA INTERNATIONAL has been licensed to carry on a deposit-taking business, and intends to provide the full range of services of a UK merchant bank.

It is the wholly owned subsidiary of one of Sweden's top three banks, Svenska Handelsbanken, and broke away from the Nordic Bank consortium last November to develop its capital markets business. Two thirds of its staff are presently involved in the trading and placing of equities, bonds and a wide range of money market instruments.

Mr Lars Evander, the managing director of Svenska International says that the bank felt that it could develop its own interests and exploit its strong Anglo-Swedish contacts better if it was independent of the consortium. "We have many medium-sized clients for whom we can now offer a full merchant banking facility."

Svenska International has a capital base of £15m, of which £10m is pure equity and £5m is subordinated loan stock. It has led and co-managed over 60 deals since November, raising approximately S6.8bn for companies, including Sonnerson, the engineering company, which raised £17.4m in July.

It has a client list of mainly medium to large firms, and in Sweden manages 60 per cent of the OTC market. Its corporate finance service includes advice on mergers and acquisitions, particularly in the financing of Anglo-Swedish trade and listings on major stock exchanges. It also operates an investment management service.

Svenska Handelsbanken, the parent company has agreed to sell its shareholding in Nordic Bank to Den Norske Creditbank Oslo, leaving Svenska International as its sole operation in London.

Building societies advance

BUILDING SOCIETIES – which lend money for house purchase – are contimuing to catch up with the nine big clearing banks in the number of branches they operate in the UK. Last year they opened 318, bringing their total to 6,480, while the banks closed 34, leaving them with 12,772.

In its annual survey of UK financial institutions outlets, Noel Alexander Associates, the banking consultancy firm, notes that this extends a six-year trend in which the societies have increased their branches by 75 per cent, but bank branch numbers have shrunk by just over 3 per cent.

The figures highlight the aggressive move by the building societies into the high street savings market.

National Westminster is top of the league with 3,248 branches, followed by Barclays with 2,959, Midland with 2,435 and Lloyds with 2,283.

Banks agree to payments study

By David Lascelles

THE LONDON clearing banks have agreed to an independent study of proposals to modify the automatic payments system (Chaps) they plan to bring into operation next February.

Potential outside users of the system, mostly merchant banks and foreign banks which do not belong to the Committee of London Clearing Banks (CLCB) which is sponsoring it, have refused to use it unless changes are made.

The dispute is about how users plug into the system. Each clearing bank, through which users must go, has its own procedures which require expensive computer equipment and software.

The users want a standardised system so that they can switch from one clearing bank to another or use several at a time. But the banks, which have invested heavily in their own procedures, are reluctant to change.

They have now agreed to share in the cost of a study by outside consultants of changes that the users are demanding, according to the CLCB.

The study may take some time, and it is still likely that Chaps will start up before all the users' complaints have been resolved.

RIDLEY PROMOTION KEY TO CHANGES

Cabinet balance kept by Thatcher appointees

BY PETER RIDDELL, POLITICAL EDITOR

"MOST important is who is the newcomer to the Cabinet," one senior ministerial supporter of Mrs Thatcher remarked on Friday morning in the aftermath of Mr Cecil Parkinson's resignation as Trade and Industry Secretary. The promotion of Mr Nicholas Ridley to Transport Secretary provides the key to the changes.

Mrs Thatcher has wanted, above all, to preserve the balance of the Cabinet and to ensure that there is no weaking in her support. The departure of Mr Parkinson removed a main prop, and the Prime Minister clearly did not want to bring in possible doubters such as Mr Kenneth Baker, the Minister for Information Technology, or Mr Kenneth Clarke, the Minister of Health.

Mr Ridley will undoubtedly be one of her supporters on the main economic questions of the day. Indeed, he was an economic "Thatcherite" even before the Prime Minister, during his disagreements with the Heath U-turn on industrial policy of 10 years ago.

The shift of Mr Tebbit across from Employment to Trade and Industry ensures that one of the key economic posts remains in loyal hands. Mr Tom King, his successor at Employment, is one of those men of office seen in all governments, not attached to any creed or grouping, though loyal and efficient. His main immediate job will, in any case, be to push through Parliament proposals on trade union law already broadly agreed by the Cabinet. He also has a conciliatory manner suited to the new phase of Government talks with the unions.

The appointments can be seen in terms of the shifting balance of debate in the Cabinet. The labels "wet" and "dry" no longer apply within the Cabinet itself. The remaining "wets", those urging reflation, are generally outside the Government; sacked ministers like Sir Ian Gilmour and Mr Norman St John Stevas and other backbenchers.

Mr Norman Tebbit, the new Trade and Industry Minister, was previously the Employment Secretary. Aged 52, a former airline pilot and Financial Times journalist, he has represented the parliamentary constituency of Waltham Forest (formerly Epping) in Essex since 1970. As Employment Secretary, he led the Conservatives' attempts to introduce more internal democracy to the trade unions.

Within the Cabinet, the pick-up in the economy, the more flexible interpretation of the medium-term financial strategy and the new time horizon produced by the general election have shifted the debate on to different issues. In particular, the very vagueness of the Conservative election manifesto left open major questions about the balance between public expenditure and taxation which the Cabinet is now having to tackle.

The potential consolidators include not only all the old "wet" groups like Mr Prior and Mr Peter Walker, the Energy Secretary, but also spending ministers keen to defend their departmental budgets, notably with those large programmes like Mr Michael Heseltine, the Defence Secretary, and Mr Norman Fowler, the Social Services Secretary.

In contrast, the radicals argue that tax cuts are a priority and needed in order to get the economy moving, in the words of Mr Nigel Lawson, the Chancellor, in his conference speech last Wednesday. Hence, public spending must be held down even if it involves "hard choices" in welfare programmes. This view has been backed by the Prime Minister and it is also that of Mr Ridley.

Mr Tebbit appeared to align himself with the radicals on tax cuts during his interview on the weekend World television programme yesterday. But in practice he may be more conciliatory, as his recent approach to the trade unions and his remarks about not "cutting to damage vital institutions" suggest.

Both Mr Ridley and Mr Tebbit are in the radical camp, in that they are firmly committed to the privatisation programme. Indeed, Mr Ridley ran a working group in opposition before the 1979 election, which produced a controversial list of state activities which could be sold.

The main immediate focus for the debates between the consolidators and radicals will be the Cabinet discussions of the next few weeks on public spending plans for the next three years. What Mrs Thatcher did yesterday was to ensure that the radical voice will become louder, not softer, despite Mr Parkinson's departure.

Joint venture company to be established

By Lynton McLain

THE BRITISH Technology Group (BTG) is to help to create 120 jobs in a new engineering company at Peterlee, County Durham, specialising in pipe parts for the oil, gas, chemical and nuclear industries.

The government-funded group is to invest £140,000 towards a £2m investment arranged to set up WFI (Europe), a joint venture company between the BTG and WFI International of Houston, Texas.

The Texas group will also put up £140,000 for shares in the joint venture company. The balance of funds is to be provided by the Northumbria Unit Trust, managed by Lazard Securities and by the Industry Department under the 1982 Industrial Development Act.

The investment by the British Technology Group in WFI (Europe) is to be made under the group's regional support role, through the North-east Regional Enterprise Board.

The Government said last month that the future funding role of the group would be restricted to its activities in the transfer of technology, but the Peterlee investment is unaffected by this.

Non-sexist ads advocated

By John Lloyd, Industrial Editor

THE EQUAL Opportunities Commission, a government body, today publishes guidelines on "non-sexist" company advertising.

The guidelines aim to replace job descriptions which denote sex – as waitress, storeman, matron or cameraman – with sexually neutral descriptions. Use of "sexually connotated" job titles in advertisements, even internal advertisements, is unlawful under the 1975 Sex Discrimination Act.

The commission warns employers: "You can legitimately describe what a job involves, but you cannot legitimately draw conclusions about the sex or marital status of applicants whom you would think suitable."

It says that illustrations showing men performing the job advertised can discourage women from applying.

● The Trades Union Congress (TUC) is to seek an urgent meeting with employment ministers to protest at draft regulations for industrial tribunals which will consider equal pay claims under the Equal Pay Act.

It says that the regulations "are designed to make sure that women stay in low paid and unskilled jobs," because they allow the dismissal of a claim if the employer can show a reason other than sex for paying women less than men.

The TUC says, "It may be that the draft procedural regulations do not conform to the European Community's directive which compelled the Government to act on this matter in the first place."

Lloyd's reform could cost up to £10m

BY JOHN MOORE, CITY CORRESPONDENT

THE PROGRAMME of reform for the Lloyd's insurance market could cost underwriters up to £10m in additional charges. The estimates are contained in a paper prepared by a former member of Lloyd's executive committee, Mr Robert Kiln.

Mr Kiln, who runs the R. J. Kiln Underwriting Agency, has also warned that the cost of the new Lloyd's building to accommodate the market, which is estimated to cost £157m, has been responsible for "a good proportion of the large increase in members (of Lloyd's) charges in recent years." These charges, he says, "have the effect of being detrimental to underwriting."

The controversial paper was due to be published in the October issue of Lloyd's Log, an internal monthly magazine circulated to the 21,000 or so members of Lloyd's.

But at the last minute ahead of publication, the Lloyd's authorities decided not to go ahead with publication after intervention from Mr Brian Brennan, a deputy chairman of Lloyd's.

In his paper, Mr Kiln, who resigned from the committee of Lloyd's nearly two years ago after protesting over policy differences, warns about the dangers of increased regulation of the Lloyd's market. "There is a danger that too much regulation will destroy or weaken the economic viability of our various business," he says.

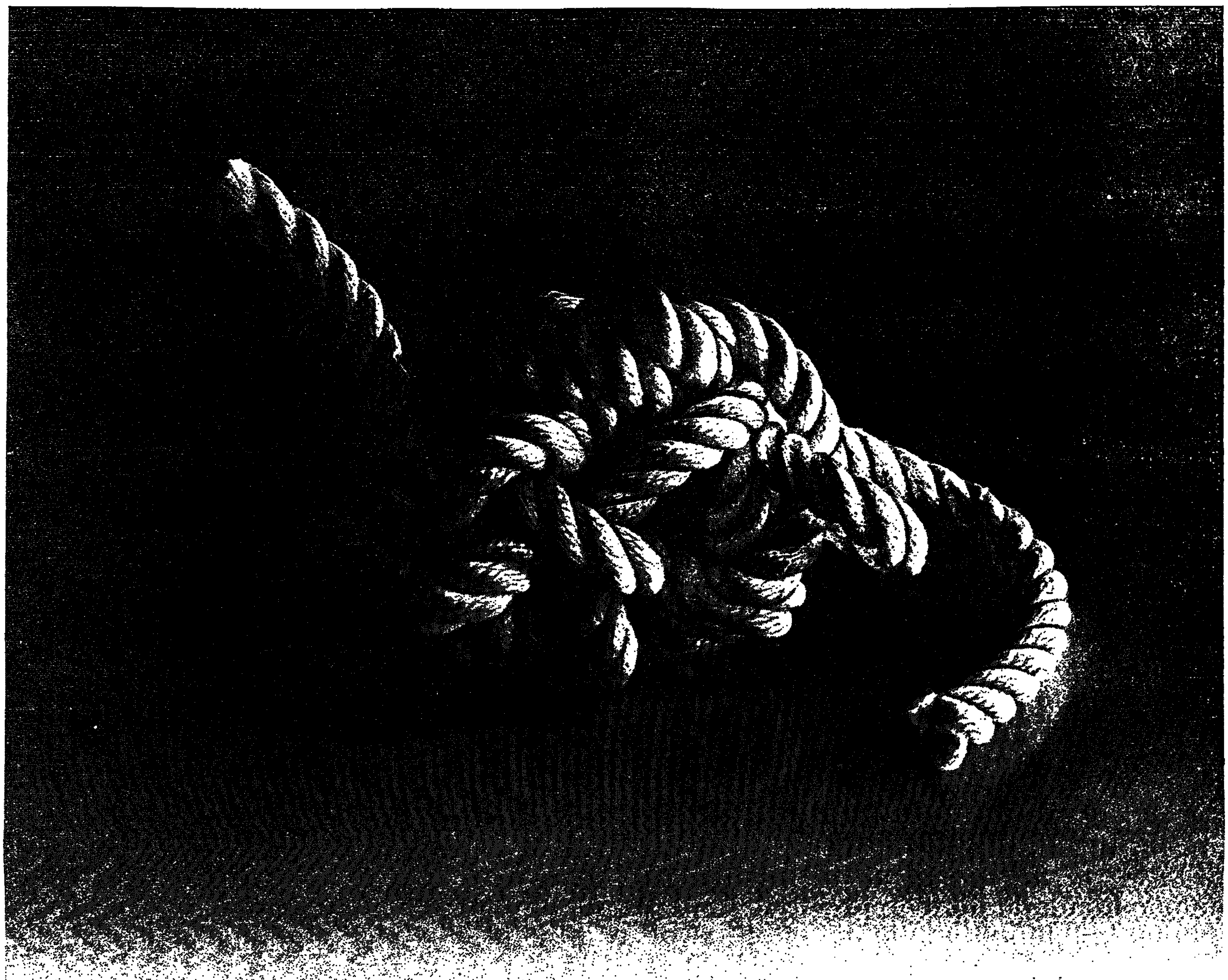
He adds: "Our chairman recognises this but with every such speech the number of working parties, advisers and paper increases at the rate of knots ... the extra costs in 1983 to date are considerable. A market figure for underwriters and agents of around £2m must be conservative." He says that it is not unrealistic that extra costs will amount to between £5m and £10m and these are "likely to escalate."

Mr Kiln says that total expenses 10 years ago in the Lloyd's market used to be about 2.5 per cent of premium income "for syndicates in a major market. Today they are probably nearer 5 per cent. This escalation has already made Lloyd's non-competitive in areas of the large volume-small profit business," particularly in the non-marine market which insures general business where claims become payable in a relatively short period and the investment gain is small.

Mr Kiln argues that the capital cost of the Lloyd's building, which has steadily risen over the years, should be met by raising capital from the members rather than meeting the costs from revenues. He suggests that members' subscriptions should be reduced if the basis of financing the new building is changed.

He also says that Lloyd's should "stop pretending to regulate areas that we cannot. Most of Lloyd's income and profits come from brokers which are large public companies. It is surely questionable whether Lloyd's should or could regulate these financial empires."

Mr Kiln warns that a rift is opening up between the corporation staff, the administrators of the market, and the working underwriters and other professionals in the market, following the self regulatory reforms. "Ways must be found to stop the alienation between the market and corporation staff which is already beginning to happen."



MINERS DRAW UP PRIORITIES FOR INDUSTRY

Joint approach sought

BY PHILIP BASSETT, LABOUR CORRESPONDENT

LEADERS OF the National Union of Mineworkers (NUM) have identified three issues on which the union would have to establish common ground with the National Coal Board (NCB) in order to make a joint approach to the Government on the problems facing the coal industry.

While yielding nothing in its determined opposition to the NCB's programme of pit closures, the decision of the NUM executive meeting in Sheffield in the north of England to list priority issues is an indication of the union's likely readiness to make such a joint approach on the right terms.

Mr Arthur Scargill, NUM president, said he hoped to secure NCB agreement on the three points: the high interest rates levied on the coal industry; an introduction of important controls to act against foreign coal and oil; and the use of subsidies to match those of European countries.

Perhaps significantly, Mr Scargill listed the policy of no more pit closures only as an addition to these three. The NCB, for its part, is keen to concentrate on the issue of overcapacity.

Mr Scargill said he expected an exchange of proposals with the NCB by letter on the proposed common points. The NCB is still thinking of a further preliminary meeting with the NUM at the end of this month or the beginning of November.

On wages, Mr Scargill predicted, after taking soundings in the executive meeting, that the NCB's final offer of 5.2 per cent would be rejected at next week's special conference.

Speaking on a pit visit in South Wales, Mr Ian MacGregor, NCB chairman, indicated that a lower pay offer was not out of the question. After saying that the present offer would not be withdrawn, he added: "Circumstances will change my generosity."

The Confederation of British Industry, the employer's body, has put its weight behind the NCB's drive to reduce its number of unprofitable pits.

"The coal industry should not be run as an extension of the social services for the benefit of coal miners" Mr Kenneth Edwards, the CBI's deputy director told the Coal Industry Society.

He also said that key British industries were paying far more for electricity than some of their European competitors and that some of these industries needed reductions of up to 20 per cent in their tariffs.

● At the Sizewell B inquiry into building the UK's first pressurised water reactor (PWR), the Central Electricity Generating Board has predicted a pessimistic short to medium-term future for the British coal industry.

Mr Peter Hughes, the CEGB's fossil fuel and energy section manager, told the inquiry that his analysis of NCB finances and coal market prospects until 1990 indicated increasing financial stringency.

The likely joint understanding between the NCB and the CEGB would result in Government subsidies to the coal industry in excess of £500m by 1985

Housing starts set to improve

By Andrew Taylor

THE NUMBER of new homes started by private housebuilders in 1983 is expected to be the highest for 10 years according to the National House Building Council.

Mr Andrew Tait, the council's director general, said private sector housing starts were continuing at a high level, despite some recent gloomy reports.

Mr Tait said that starts were expected to exceed 170,000 this year, compared with 138,000 in 1982. The number of private homes expected to be completed this year was likely to be more than 150,000, which would be the highest figure for seven years.

The improvement in private housing starts was greatest in the more economically successful south-east of England, where the number of starts rose by 39 per cent during the first nine months, compared with the corresponding period of last year.

CBI pessimistic over scope for tax reduction

BY JOHN LLOYD, INDUSTRIAL EDITOR

THE CBI, the employers' body, is pessimistic about the Government's scope for future tax cuts – and remains distinctly cautious about the duration and strength of the recovery.

In background papers to its conference in Glasgow next month, the CBI notes that Government plans for a "modest reduction" in tax rates depend on a reduction of the share of public investment in GDP to 41.5 per cent by 1985–86, and an annual growth rate of 2.5 per cent. It says that "many forecasters believe that this assumption is optimistic."

The paper on economic prospects stresses that recovery is fragile and "patchy", and that "it will be some time before we reach even 1979 levels of production."

Consumer spending has been the "main driving force behind the upturn", but "about half the extra demand has been reflected in higher imports. Exports remain weak and industrial investment is only picking up slowly after the falls in recent years."

It says that consumer spending will make less of a contribution to growth in 1984, and that unemployment is likely to rise slowly from its present level. Profitability will improve after sharp falls in recent years – but "the level of profitability will remain low by historical and international standards."

However, inflation will remain relatively low "and is unlikely to increase greatly in the near future. The 12-month retail prices index increase will remain around 6 per cent from the end of this year and through 1984."

The CBI is also concerned about "wages drift", claiming that it accounts for manufacturing earnings increasing between 2 to 4 per cent more than settlements over the past year.

"Recent UK performance on labour costs has, on average, been worse than that of our competitors. This has made it more difficult for UK producers to compete in world markets."

It says that low growth is not inevitable, and proposes action by Government and business to create a "virtuous cycle" of increased output and profitability.

Among other proposals, it says that Governments of the major economies "could take concerted action to encourage world growth through less restrictive policies" – a strategy so far shunned by the UK Government in international forums.

It also argues that the reinvigoration of European industry may mean "going for European scale – certainly in marketing and often in production too."

A paper on industrial relations refers to a large-scale study recently completed by the CBI on employee involvement in major companies. It says that their survey showed that senior management was committed to employee involvement, believed it was of value in terms of the commercial success of the enterprise, and that approaches differed widely between companies.

Murray raises State-TUC deal

By Our Labour Correspondent

MR LEN MURRAY, TUC General Secretary, yesterday publicly raised the sensitive issue of a deal between Government and unions for the first time since the improvement in relations between the Conservative administration and the TUC.

Mr Murray's remarks gained added significance from the fact that TUC officials are holding out the prospect of such a deal on the Government's new trade union democracy bill in a confidential background paper for union leaders who will meet Ministers on Wednesday on the issue of ballots on political funds.

Mr Bill Keys, chairman of the TUC's employment policy committee, and general secretary of the print union, Sogat '82, said last night that unions must be prepared to reach a deal with the Employment Secretary on such funds.

Mr Murray was at pains both in his careful address to the biennial conference in Brighton of the Engineers' and Managers' Association (EMA) and afterwards to stress that he had not specified any particular government in his remarks.

His thoughts accord with the spirit of new realism which has swept through the TUC since the shift in direction at last month's Congress, and which was also a key element of his EMA address.

Mr Murray told the conference: "Union have to rethink their role individually and collectively through the TUC. We have to equip ourselves to accept responsibility."

That meant examining how unions could improve their services to their members, improve their representativeness, develop their bargaining role and "have regard to our wider social obligations."

The crucial passage of his speech said: "Unless we have something to give to government we will get nothing from government. That means that unless members them selves are willing to give something to government then members will get nothing from them. That's essentially a collective bargaining relationship, but it means accepting responsibilities

£15m merger limit likely to be raised

BY DAVID CHURCHILL, CONSUMER AFFAIRS CORRESPONDENT

THE financial threshold determining which mergers may be referred to the Monopolies and Mergers Commission is likely to be raised soon for the first time in nearly four years.

At present, all mergers where the target company has assets of more than £15m face a possible referral to the commission to determine whether or not the deal is in the public interest.

However, officials at the Department of Trade and Industry believe that a more realistic figure, after taking account of inflation, should be £25m.

The assets criterion was increased to £15m in April 1980 after having remained at a £5m level for several years. Officials at that time conceded that too much time was being wasted in considering small mergers which fell within the scope of the legislation. The Office of Fair Trading (OFT) is obliged by law to recommend to the Trade Secretary whether or not all mergers which are eligible for referral should be investigated.

However, it is felt that the rise in inflation since 1980 means that a more realistic figure of £25m should now be included in the merger legislation. This would probably require a parliament order.

When the assets criterion was last changed, the number of mergers falling within the scope of the legislation fell sharply. In 1979, for example, the 257 mergers that were considered by the OFT under the £5m assets criterion would only have numbered 131 under the £15m level.

Figures from the OFT show that in 1982 some 73 out of the 190 mergers considered involved assets in the target company of less than £25m.

A decision on whether or not to raise the limits is one of the first likely to be faced by Mr Norman Tebbit, the new Trade and Industry Secretary, in the wake of the resignation last week of Mr Cecil Parkinson. Mr Tebbit will also face demands for an early clarification of the Government's overall merger policy after the confusion that has existed over the policy for the last two years.

Airports raise profits

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

BRITAIN'S 22 airports owned by local authorities expect to earn a total operating surplus of nearly £22.8m in this financial year. After allowing for interest and other charges, the net surplus is expected to amount to about £3.9m.

These results, estimated by the Chartered Institute of Public Finance and Accountancy (Cipfa), are better than those for the previous financial year, when the estimated net surplus amounted to little more than £119,000, after an operating surplus of over £19.8m.

Airports expecting to make net profits include Birmingham, Bristol, East Midlands, Gloucester, Luton, Manchester, Newcastle and Norwich.

The biggest estimated net surplus is that for Manchester, with £8.87m, followed by the East Midlands at £1.36m.

Higher pay in public sector

By Michael Dixon

DESPITE GOVERNMENT pressure for savings, public sector employers are taking on financial staff at higher salaries than they would be offered in the business sector, says a survey by the Accountancy Personnel recruitment consultancy published today.

"Public sector staff often enjoy a differential as high as 20 per cent, together with a level of fringe benefits and working conditions which are not economic for many employers in the private sector to offer today," it says.

UK NEWS

Komatsu invests £1m to save costs

By Lynton McLain

THE JAPANESE Komatsu company, the second largest construction equipment maker in the world, is investing £1m to re-equip its engineers in Britain with labour-saving tools as an alternative to increasing the workforce.

The company claims to be the only one in the construction equipment sector still making a profit in the face of the worst slump in demand for 30 years, according to Mr Ian Patterson, the sales director of Marubeni Komatsu, the UK sales and service company.

The company cut its UK workforce of 400 people by 75 per cent three years ago, just ahead of the downturn in demand, in a cost-cutting exercise to remain competitive. Sales volume for the industry in the UK and other world markets fell by over 30 per cent on average.

The company's strategy is to further its penetration of the UK market, while keeping its total workforce at the present level of 100.

The investment in labour-saving service tools is a crucial part of this strategy to cut costs in an attempt to maintain the company's competitive edge.

The decision to go ahead with the re-equipment programme came after a team from Komatsu in Japan identified the need for new, highly productive power tools and overhead cranes for the UK company's five depots as the best way to cut the cost of routine servicing of customers' construction machines.

The use of the £50,000 overhead cranes, now being installed, will enable one service engineer to change a major engine on a large machine in two hours, work which would previously have taken 12 man-hours, Mr Patterson said.

The changes were necessary to enable Komatsu to counter the "worst price competition I have seen in 30 years," he said.

Many competitors were selling heavy construction plant and equipment in Britain at a loss, according to Komatsu.

Marubeni Komatsu was not selling any of its machines at below the cost of production, Mr Patterson said; "We have to trade at a profit." The company has increased its turnover, from £14m last year in the UK to a forecast £18m this year.

Petrofina cuts product prices by up to 23%

BY RAY DAFTER, ENERGY EDITOR

PETROFINA, the Brussels-based energy group, is to slash the schedule price of commercial and industrial oil products by up to 23 per cent as part of a pricing revolution sweeping through the UK oil market.

The amount that oil buyers pay will remain largely unchanged because Petrofina is also reducing the amount of rebates offered to the majority of its customers. But the company said that the move should make the pricing structure much clearer, as well as reduce the risks of big lurches in quoted rates.

Other companies, including British Petroleum and Shell UK, have in the past few weeks reduced both their schedule prices and discounts, although to a much smaller extent than Petrofina. It is still possible for big fuel buyers to purchase gas oil at about 40 per cent below the official schedule price quoted by some refiners, for example.

In a new initiative, Petrofina is aiming to restrict its rebates to no more than 10 per cent of the schedule price. It is hoping that the rest of the industry will follow suit.

The move, to be announced formally on Friday, is likely to send a shock wave through the oil industry. Although Petrofina holds only a 4 per cent share of the UK oil market, its new pricing structure could cause a clamour from fuel buyers for an industry-wide reduction in official prices.

At the moment, there is a big variation in schedule prices quoted by different companies. From Friday, Petrofina will be charging a maximum of 18.5p a litre for gas oil compared with about 21p charged by BP and 25p by Esso under their current schedule rates.

BP which claims that it started the movement towards more "sanity" in oil pricing, said that its schedule price and rebate reductions had been "purely an arithmetical adjustment."

"The relationship between the schedule price and discounts have been getting out of hand and what we have done is to make adjustments to both to give a realistic relationship between them," it said.

But one of the UK pricing system's biggest critics, Dr Pierre Jungels, managing director of Petrofina UK, said that in volume terms virtually all oil products were now being sold at a discount. Some 10 per cent was subject to the largest rebates.

The present system was obscure and discriminatory, he said. Without a transparent pricing system it was difficult to compare the price of oil with other fuels.

It was possible that the system of big rebates could also trigger a harmful surge in crude oil prices, Dr Jungels claimed. The present structure led to volatile movements in schedule prices. At times of supply uncertainty, the Organisation of Petroleum Exporting Countries (Opec) might see big rises in schedule prices as a signal that crude oil prices should also be raised.

Dr Jungels said that UK oil prices should be made even more transparent, with companies publishing both their schedule prices and the conditions for their discount.

Other, larger companies argued at the weekend that a quoted scale of discounts would work against the interests of bulk buyers which currently chose suppliers on a tender basis. It was claimed that competitiveness, which worked to the advantage of big customers, would thus be reduced.

UK COMMERCIAL AND INDUSTRIAL OIL PRICES
Schedule prices – pence per litre

		Shell*	BP*	Esso* (under review)	Petrofina (proposed)
Derv diesel		34.00	34.54	38.97	32.70
Kerosene – standard		25.52**	24.72	25.22	20.14
Gas oil		20.77	20.77	24.67	18.50
Fuel oil –	medium	16.79	16.72	20.18	15.33
	heavy	15.94	15.81	19.29	14.53

* Inner zone prices charged for fuel in main centres
** Based on 900-litre delivery volume

ITV to press for franchise extension

By Raymond Snoddy

THE INDEPENDENT television (ITV) companies are to push for an extension of their franchises because of the implications of new technologies such as cable and satellite broadcasting.

The companies believe that without an extension of the franchises – due to run out in 1989 – they will be unable to take decisions on the major long-term investments needed to launch direct broadcast by satellite (DBS).

Mr Leon Brittan, the Home Secretary, announced last month that independent television – though not necessarily existing franchise holders – could have two DBS channels to compete with the BBC in space.

Mr Brittan suggested then that the likely timescale for the start of an independent DBS service, which would require a multi-million pound investment, would be 1987–88.

Companies increasingly take the view that they cannot consider making such an investment, with a payback period which could be up to eight years, so close to the time when their terrestial franchises come up for renewal, and may be lost.

A 1989 franchise round would also coincide with the period when the existing ITV companies might be starting to feel the effects of competition from cable.

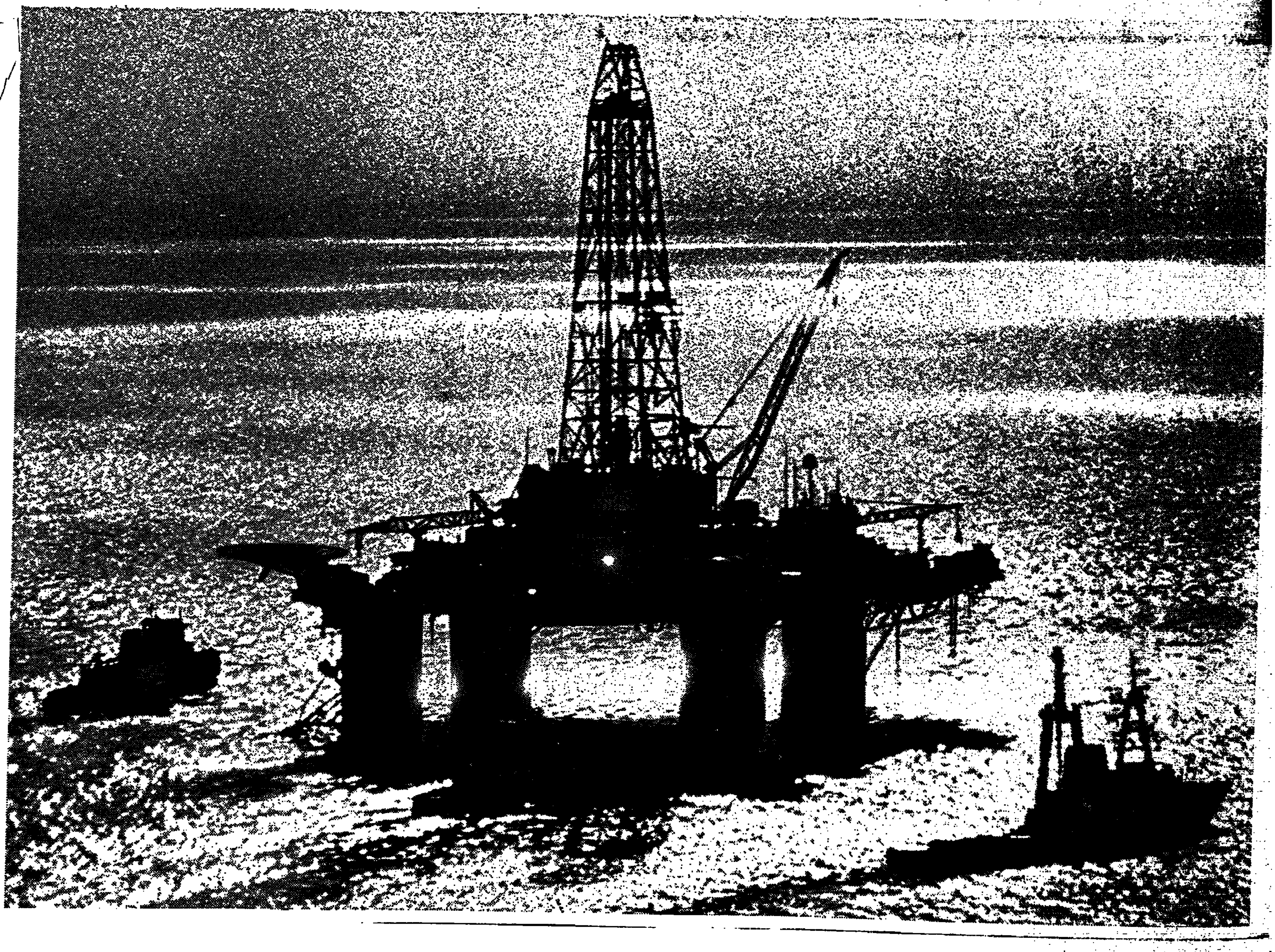
Mr Paul Fox, chairman of the Independent Television Companies Association (ITCA) and managing director of Yorkshire Television, recently called for a three-year extension to 1992.

The ITV companies have already made their views known to the Independent Broadcasting Authority (IBA) and believe the organisation is sympathetic.

At the moment independent television is riding high. Advertising revenues, net of agency commission, will easily break the £800m mark in the year to January 1984 – a rise of about 18 per cent. ITV is capturing more than 56 per cent of the total television audience.

The future is more uncertain. Recently Mr John Whitney, director general of the IBA, asked for preliminary consultations with those who might be interested in a DBS contract. He warned that the financial risks for a programme contractor would be considerable.

We're the first to admit your investment needs aren't going to be the same as the next man's.



7

BUILDING AND CIVIL ENGINEERING

MIDDLE EAST CONTRACTING

West Germans in the Iraqi quagmire

WHILE MOST foreign contractors working in Iraq now claim to see a very dim light at the end of their payments crisis tunnel, those in West Germany are still groping in the dark.

When Iraq embarked on its national development programme in 1981, the world's contractors flocked in to pick up lucrative multi-million dollar contracts. West Germany was no exception and rapidly moved into a leading position in the market.

In 1979, West German companies gained DM 166m worth of new contracts in Iraq, or 2.2 per cent of their total foreign earnings. In 1980 this new contract value rose to DM 2.07bn, or 20.5 per cent of total foreign construction earnings, and in 1981 the new contract value shot up to DM 5.6bn or 40 per cent of the total.

But the bubble quickly burst. In 1982 the value of contracts gained slumped to DM 668m, just 8 per cent of foreign contracts total which itself had fallen by 31 per cent from DM 12.1bn to DM 8.4bn.

But as it was, however, this fall-off in business was made even worse by Iraq's inability to pay for the work being carried out on the contacts gained in 1981 and 1982.

When the Iraq-Iran war started in 1980, Iraq was exporting 2.32m barrels a day (b/d) of crude oil worth $25.5bn against total goods imports of $12.2bn. But the war damage to the Gulf terminals and the shutdown of the Syrian pipeline slashed crude oil exports to between 500,000 and 600,000 b/d both last year and this.

As a result, Iraq's exports have fallen to $10.5bn in 1981, $10.25bn in 1982 and an estimated $8bn this year. However, Iraq has had to increase its imports over this period to maintain the war effort. They jumped 40 per cent in 1981 and have remained in the $16-$17bn range both last year and this.

This has cut Iraq's $12bn surplus in 1980 to an annual deficit of $8-$10bn since.

Faced with a politically as well as economically import development programme but no money to pay for it, Iraq asked its foreign contractors to finance their projects themselves through 1983 and 1984, by accepting (a) a greater share of the payments due in local currency, (b) part payment in oil, and (c) refinancing of the foreign currency portion of the outstanding payments.

This hit West German contractors particularly hard. Although the Middle East in general provides 38 per cent of all foreign contracts in the world, it provides 70 per cent of West Germany's foreign construction earnings. Moreover, Germany's construction work in Iraq, at its peak, accounted for 46 per cent of this share. But this problem is compounded by the small number of contractors involved and the consequently high share in their earnings represented by Iraqi contracts.

Germany's foreign construction business is dominated by the "twelve apostles" (Germany's 12 biggest construction firms). But within this group just five companies, Phillip Holzmann, Bilfinger und Berger, Hochtief, Dyckerhoff und Widmann and Strabag account for the lion's share of business.

Foreign construction work made up 70 per cent of the new contracts gained by Philip Holtzman last year and 81 per cent of its order book. The respective figures for the other leading companies were: Billinger und Berger, 62 and 81 per cent; Dyckerhoff und Widmann, 32 and 57 per cent; Hochtief, 41 and 52 per cent; Strabag, 20 and 62 per cent.

After a good deal of hard bargaining, West Germany's contractors have now managed to arrange refinancing for all but two of their projects in Iraq, and agreement on the temporary financing of these projects is expected within the next few weeks. But such cover, backed by the state credit agency Hermes, is valid only for payments due this year and, depending on the individual agreement, still requires the Iraqis to pay between 10 and 15 per cent of the payments due. None has been received so far.

But Germany's contractors are involved in major projects like dams, canals, roads and airports, which will take years to complete. Despite this nothing has been agreed on the financing of payments due in 1984 and 1985, even though it is generally accepted that Iraq's financial situation can only deteriorate for so long as the war drags on.

Even with financing agreements for this year, therefore, some German contractors are being pushed into a precarious position in which they may be forced to pull out of Iraq to cut mounting losses, unless the West German Government can come up with some comprehensive rescue package.

In the broader view, the payments crisis in Iraq and payments difficulties in the other major Middle East markets, like Saudi Arabia, is already forcing German contractors to look further afield for work to compensate for their losses.

TOM SEALY

Japanese to resume work at Bandar Khomeini

Resumption of work on the Bandar Khomeini complex looks more likely following an agreement by two contractors of the Mitsui group, to act as managing contractors for the construction of the petrochemical complex at the southern Iranian port of Bandar Khomeini.

Last July the Mitsui Group and the National Petrochemical Company of Iran reached a detailed agreement on future financing for the project.

Under the agreement Iran will supply all necessary funds for construction of the complex in future and the Japanese will extend full co-operation in the work as a minor partner.

Heavily fined German builders to appeal

The West German Cartel Office has fined 77 West German construction companies some DM 54m for illegally discussing prices on a variety of public and private building projects.

The Cartel Office also said that investigations regarding a further 10 firms are continuing. The fines are believed to be the largest ever announced by the Office. Companies involved include all the industry leaders, most of whom have appealed against the decision to West Berlin Supreme Court.

Fire protection project

A CO-OPERATIVE project is being undertaken by the Fire Research Station in collaboration with Colt International to study the interactions which can occur between vents and sprinkler installations in industrial buildings. The project will explore and quantify the benefits to the Fire Brigade and all those concerned with industrial protection of a system of vents to complement sprinkler installations. Expected to take two years to complete with interim reports on progress, work will mainly be carried out at FRS by Mr Peter Hinkley, sponsored by Colt.

UK's largest flat roofing contract

ONE OF the largest roofing contracts ever carried out in the UK has just got underway at London's Heathrow Airport.

The roof is for the new terminal four complex and involves laying over 23,000 sq metres of mastic asphalt by F. J. Prater Asphalte, the contractors. The material is being supplied by Permanite Asphalt, who are hauling the 1,800-tonne consignment from a manufacturing plant in Somerset.

The British Airport Authority opted for mastic asphalt because it has proved to be the most reliable material on the 70 acres of flat roofs which come under its control. The terminal four building has a protected membrane roof, which involves insulation material being laid on top of the mastic asphalt waterproofing, to protect it from large temperature variations.

CONSERVATION AREAS

Housebuilders attack 'Green Belt spread'

THE Housebuilders' Federation clearly believed that attack is the best form of defence. Having recently come under fire for allegedly conspiring with Government Ministers to destroy Britain's Green Belts—it has launched a scathing attack on the Government for its "failure to control the spread of the Green Belt."

Far from these precious tracts of open land being nibbled to death by greedy builders, the facts as collected by HBF from sources such as the Countryside Commission, Nature Conservancy Council and county structure plans seem to indicate that local authorities are nobbling potential development land by sticking Green Belt designations all over the place.

Certainly the one area where clear statistics are available confirms this: the approved Metropolitan Green Belt around London has doubled in the last decade and now stands at 1.2m acres—four times the size of the built-up area of London itself.

HBF claims that, far from Ministers being in their pockets, they have a hard struggle ahead to get these policies halted, let alone reversed. They realise it is a politically sticky situation, but want to make it absolutely clear that the recent controversial Green Belt circular, which started all the fuss, "far from being a developer's charter, contains no positive measures that would curb the unjustifiable expansion of Green Belt."

MIRA BAR-HILLEL

Architects' commissions boosted by refurbishment

REFURBISHMENT and rehabilitation work has boosted new commissions received by architects in the second quarter after a relatively static workload period during the previous six months, according to figures released by the Royal Institute of British Architects.

The value of new commissions for private sector practices is estimated at £2.47bn, an 11 per cent real increase over the previous quarter and a 17 per cent rise on last year's levels.

Of this, more than a quarter is now accounted for by rehabilitation commissions against an average of a fifth in recent years and less than one-sixth during the building industry's mini-boom in 1979.

The upturn has been most vivid in London, South Eastern and Midlands based practices. Those in the South West and Wales have seen little change in their workload levels over the past two years.

But in the North and in Scotland the value of new commissions has followed the trend of recent quarters with further falls. In Scotland, for example, new commissions are down to £173m from £195m last year, while in London the current £887m shows a marked rise on the £689m recorded in the second quarter of 1982.

The RIBA points out that the proportion of work either abandoned or postponed at the new commissions stage—28 per cent in the second quarter—is higher than expected, giving rise to fears that increase in new commissions may not feed through to production and building later this year.

The value of work undergoing production drawings rose by 14 per cent in real terms over the quarter to £2.06bn—the second successive quarterly increase, though from a very low level in relation to the level of new commissions.

Employment levels in the profession are improving, however, showing an increase in the number of salaried architects employed for the second successive quarter.

£8.9m City offices for Mowlem

A management contract worth £8.9m for an office development in the City of London has been awarded to JOHN MOWLEM AND CO. The work is for a joint venture of the English Property Corp and the National Provident Institution. To be known as Centurion House, it is on a constricted, sloping site bounded by Monument Street, Fish Street Hill, Lower Thames Street and Pudding Lane.

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UK's largest flat roofing contract

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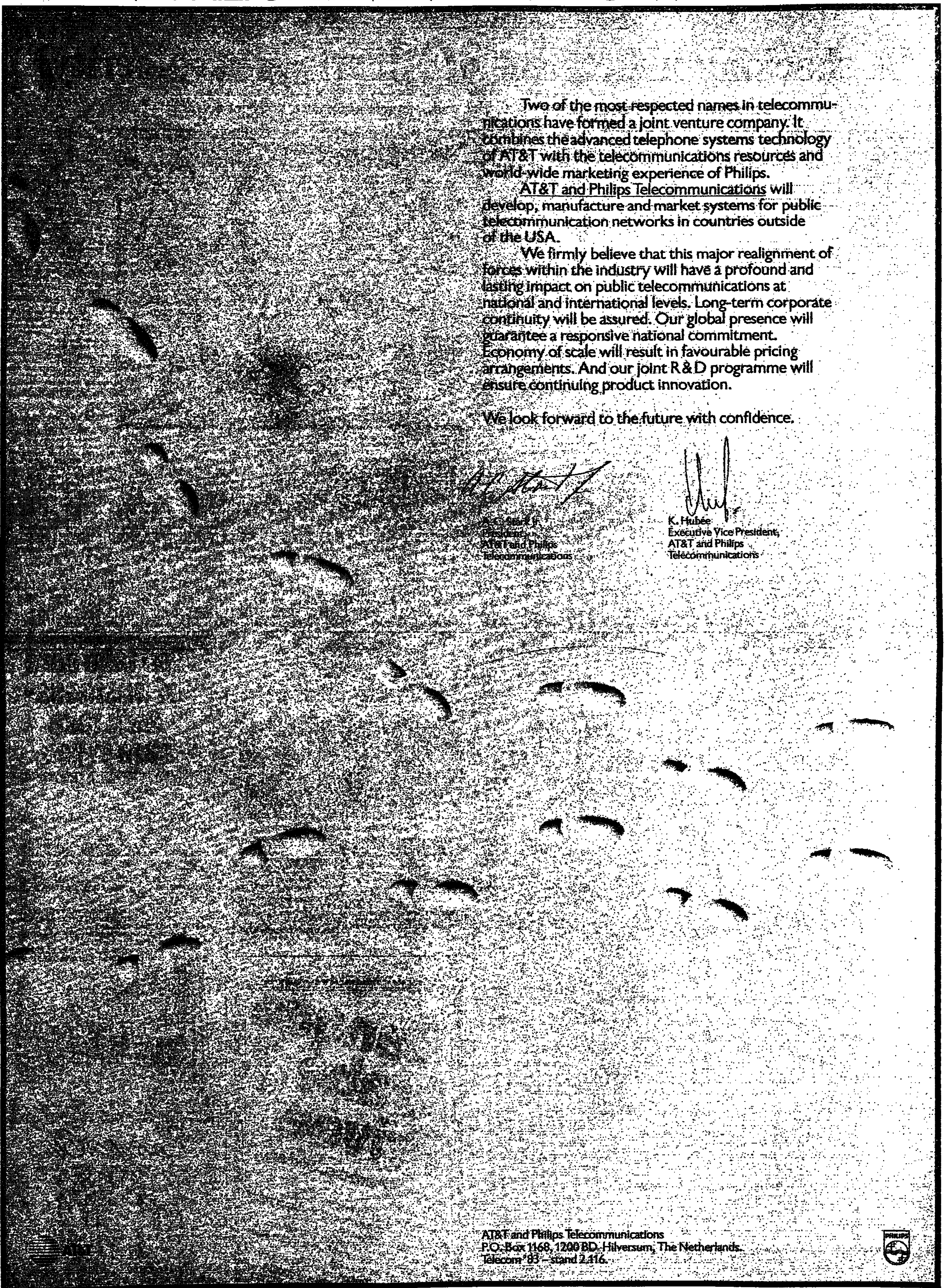
AT&T AND PHILIPS ARE VENTURING FORWARD TOGETHER



AT&T AND PHILIPS TELECOMMUNICATIONS

INTERNATIONAL COMPETITIVENESS

'A shocking indictment of American mediocrity'

Christopher Lorenz reports on a study of U.S. and Japanese attitudes to product quality

FOR THE last three years the massed battallions of American industrial management, from the topmost captain down to the humblest sergeant, have been flooding across the Pacific to Japan, in a bid to steal the enemy's manufacturing secrets and put them to desperately-needed use back home.

After all the studies, books and articles that have been written in that time, and with all the signs that so-called "Japanese techniques" are already starting to make a dramatic impact on the quality and productivity of some U.S. manufacturers from car and locomotive producers to the makers of semiconductors — one would have thought that yet another comparative report would have gone down like a lead balloon.

"We've heard it all before," might well have been the reaction from a constituency which has recently tired of the clichéd clarion call "Go Japanese," and has instead started trying to borrow from the equally successful management styles of home-grown American "excellent companies" such as IBM and Hewlett-Packard.

But one would have reckoned without a devastating new study, called "Quality on the Line," which documents the generally appalling quality of one of the simplest and most common American manufactured products, the humble domestic air conditioner. It constitutes a damning indictment of production and general management in the U.S., in fields far removed from air conditioning itself.

Comparing the defect rate of U.S. and Japanese conditioners, the report concludes that the two countries are in entirely different leagues: the worst conditioner from any Japanese company had a failure rate of less than half that of the best American manufacturer. Hence, in part, the success of Japanese conditioners in the U.S. marketplace.

The research was summarised in the latest issue of the Harvard Business Review, which was published towards the end of the summer holidays. Press coverage was therefore sparse, but it is understood that the behind-the-scenes reaction of corporate America has been as shocked as was the researcher, Professor David Garvin, when he first compiled the results of his intensive, two-year study.

A CHILLY CATALOGUE OF FAILURE

(Defect rates in US and Japanese air conditioners)

(In the factory: Assembly line defects per 100 units)

	American	Japanese
Total	63.5	0.95
Leaks	3.1	0.12
Electrical	3.3	0.12

(In the field: Service call rate per 100 units under first year warranty coverage)

	American	Japanese
Total	10.5	0.6
Compressors	1.0	0.05
Thermostats	1.4	0.002
Fan motors	0.5	0.028

As Garvin suggests in his summary article, the implications of his findings reach far beyond the narrow bounds of the air conditioner industry, into U.S. manufacturing as a whole. Not only are domestic air conditioners simple and mature products whose manufacture should have been mastered long ago by even the least-sophisticated American company, but this very simplicity makes inter-factory comparisons far more valid than is usually the case.

Garvin also took the trouble to visit and study all seven Japanese air conditioner plants, and all but one of the 12 in the U.S. "No apples versus oranges here," he emphasises: "the comparison is firmly grounded.

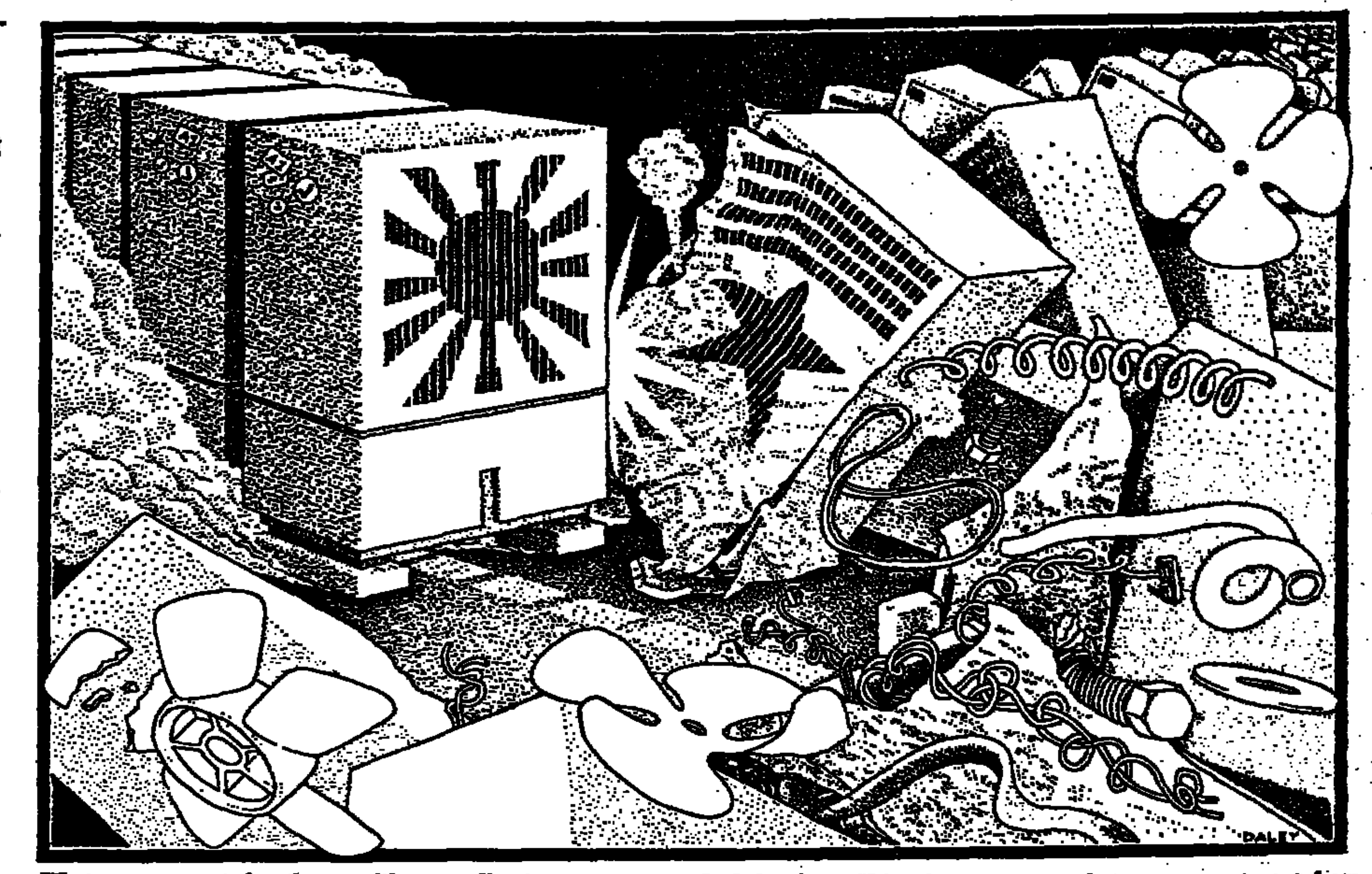
"The shocking news, for which nothing had prepared me," he reports, "is that the failure rates of products from the highest-quality producers (in Japan) were between 500 and 1,000 times less than those of products from the lowest (in the U.S.)."

In rather simpler terms, he came up with two basic findings: that during the production process itself, the Japanese defect rate was almost 70 times lower than the U.S. And that in the first year after the conditioners had been sold, the Japanese defect rate (measured by the number of service calls) was nearly 17 times better than the American. Some of the detailed results of the survey are shown in the table.

In flat contradiction to the conventional wisdom of many western manufacturers (in all walks of industry), Garvin also demonstrated beyond doubt that it pays to invest in better quality. Not only were the highest-quality producers also those with the highest output per man-hour (a finding independent of any differences in production technology or capital intensity), but the Japanese manufacturers incurred warranty costs averaging only 0.6 per cent of sales, as against a range of between 1.8 per cent and a whopping 5.2 per cent for the Americans.

Calculating what is known in the trade as the "total cost of quality" reinforced these conclusions, according to Garvin. In theory, low warranty costs might be offset by higher expenditures on defect prevention. But his results produced the opposite conclusion: that the costs the Japanese incurred by ensuring quality were less than half the failure costs incurred by even the best U.S. companies —just 1.3 per cent of sales against 2.8 per cent.

The reason is clear, Garvin claims; failures are much more expensive to fix after a unit has been assembled than before. "The cost of the extra hours spent pre-testing a design is cheap compared with the cost of a product recall; similarly, field service costs are much higher than those of incoming inspection" (of both parts and the fully-assembled product).



What can account for these extraordinary differences between the Japanese and the Americans? The tired old claim that Japan is full of miracle workers (and managers), while Americans (and the rest of us) are merely human?

Far from it, concludes Garvin, along with the majority of U.S. academic opinion. No, it's just that the Americans have made virtually every obvious mistake in the book, while the Japanese have exercised their frightening ability to master every detail of the production and marketing process—more or less like IBM and Hewlett-Packard, in fact.

Here is just a taste of the differences Garvin found in the two countries' managerial practices:

- The quality control function tended to have a higher status, with more direct access to top management, in the Japanese companies.
- The Japanese companies reviewed defect rates in daily meetings. The U.S. plants with the lowest assembly-line defect rates averaged 10 such meetings per month; at all other U.S. factories, the average was only four.
- Every Japanese company used a group of employees as typical consumers, to test and evaluate products, with final authority over their release. But at nine of the 11 U.S. plants, first-line supervisors told Garvin that their managers attached far more importance to meeting the production schedule than to quality, or any other objective. This accords with one of the most common findings in comparative research on U.S. and Japanese manufacturing.
- Only three U.S. plants set annual targets for reducing failures in the field; between 1978 and 1981, these were the only ones to cut their service call rates by more than 25 per cent. Yet all the Japanese companies consistently improved their quality—in several cases by as much as 50 per cent—and they all had elaborate company-wide systems of goal-setting.
- The Japanese not only collected field failure information that their U.S. counterparts ignored, they also insisted on extreme precision in reporting. "It was not unusual for Japanese managers to be able to identify the 30 different ways in which Switch X had failed on Model Y," reports Garvin.
- Nor did the Japanese have to wait for such information. In the U.S., service call statistics took anything from a month to one year to get from the field to the factory; in Japan it was only between a week and a month.
- The Japanese all use "reliability engineering," a particularly sophisticated technique—employed in the U.S. aerospace industry for over two decades—for analysing the weaknesses of new product designs. Only one American maker of domestic air conditioners practised the approach—and its failure rates were among the lowest.
- At most of the Japanese companies new assembly-line workers were trained, in all jobs on the line, for about six months. American workers received only several hours or days of instruction and usually just for a single task. "Not surprisingly," comments Garvin, "Japanese workers were much more adept at tracking down quality problems originating at other work stations and far better equipped to propose remedial action."
- Every Japanese plant made extensive use of so-called "statistical quality-control techniques" (including the heavy use of charts) in controlling its production process. Only one U.S. plant—the one with the lowest defect rate—made a comparable effort.
- The Japanese gave their workers much more information before they introduced a new model on the production line—which they did far more often than the Americans (this is a key factor in Japan's export drive, whether in conditioners, cars or consumer electronics).

So the dreary catalogue continues.

From one of the oldest hands at the Harvard Business School, the normally temperate Professor Kenneth Andrews (who edits the Review), it drew the uncharacteristic comment that the study constitutes "shocking and . . . irrefutable evidence of mediocre American manufacturing performance . . . our quality problem must be worse than we thought."

On virtually the only high note in his article, Garvin concludes that Hewlett-Packard, Ford and a number of other U.S. companies are currently demonstrating that it is not impossible to make the extraordinary improvement in quality levels which is necessary if the Japanese are to be beaten on their own ground.

But it takes time, he warns. "What is needed is a long-term commitment to the fundamentals—working with vendors to improve their performance, educating and training the workforce, developing an accurate and responsive quality information system, setting targets for quality improvement, and demonstrating interest and commitment at the very highest levels of management."

That's all.

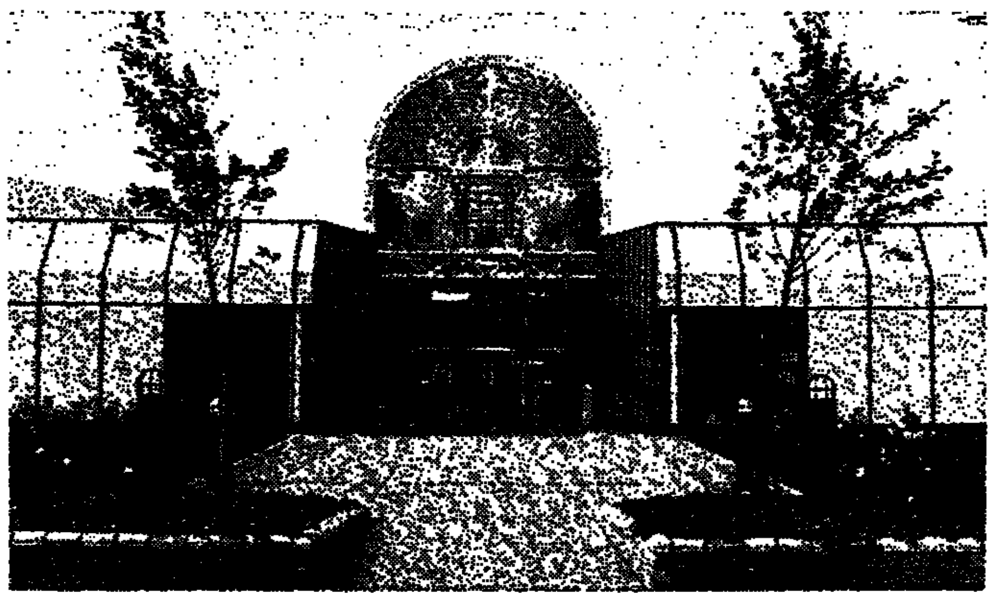
* *Quality on the line, Sept-Oct 83 issue. Reprint number 83505. From Reprint Service, Harvard Business Review, Boston MA 02163, U.S. Telex No. 6817320*

THE ARTS

Architecture

Colin Amery

The best of British—almost



The new smooth face of the town hall at Chester-le-Street in the North East — from the new exhibition at the RIBA.

British Architecture Now is the title of the major exhibition that has just opened at the headquarters of the Royal Institute of British Architects at 66 Portland Place, London W1 where it can be seen until November 4. It will in fact be visible for longer than that as it will be going on a national tour during 1984—which is to be the year of the Festival of Architecture. The show has been organised by the enterprising RIBA Journal and selected by its editor, Peter Murray and two leading architects Douglas Stephen and James Stirling.

It is displayed in a circular tent-like structure painted in post-modern pastel colours. Each architect has been responsible for the arrangement of his own panel and there is a good selection of models. The exhibition has been sponsored by Willett.

It is one of those shows that repays careful viewing—it is such a broad and general survey. There are 109 entries selected from over 600. It seems to be designed to show the world that architecture is alive and well and living at Portland Place. But this is not quite true; there are major omissions.

In order to get the gripes out of the way quickly I would like to record my disappointment that there is nothing by Terry Farrell, Norman Foster, Denys Lasdun, Richard MacCormac or Piers Gough. All of these architects have interesting things on the drawing board or just completed. It would be unfair to say the show is pedestrian but true to say that you have to work quite hard to pick out the works of particular promise and talent. However it makes no claims to represent the best of British architects at this moment, only to prove that a lot of them are producing good work.

What is outstanding? There is an interesting house by Ian Ritchie — called Eagle Rock House designed in the shape of a huge bird — the tail making a crystal green house. Blinds move over the windows like a set of ruffled feathers. A factory in Glasgow converted into flats by Alan Phillips Associates gives these architects an opportunity to experiment to their hearts' content with their limited knowledge of the classical language.

However limited the course of post-modern classicism may be, this scheme shows that the elements do still apply. A rusticated base, columns and a roof line do add up to a civilised building. Michael Carapetian is an interesting architect who has previously practised in Iran and has now found a client for a promising house to be built in Chelsea. It is planned for a typical London site at the end of an Edwardian terrace.

The response is an original one and indicative of the way architecture is developing. The house borrows heavily from its neighbours — round bays, rectangular bays and the outline of an older house but it is decidedly of the present day in its plan and use of materials. There is no doubt that England lacks the kind of clientele for the new reasonably scaled private dwelling that exists in America. I feel it is up to architects to demonstrate to the new rich of Thatcher's Britain that as good a thing to do with profits as any is to build new houses.

Restoration is now a highly organised and skilled business and the model of the timber frame structure of Speke Hall (under restoration by Donald Insall and Associates) is a clear demonstration of the level of expertise that is needed for the repair of sophisticated older structures.

Repair and adaptation of a very different kind has been carried out by one of the best smaller practices, Hunt Thompson Associates, on a block of council flats of vintage 1939 in Hackney. Somehow the impossible seems to have been achieved — for £6m — every flat in this dreary, just pre-war building has been "customised." To escape from the horrors of architectural jargon for a moment what this means is that everyone has collaborated with the architect in an elaborate consultation programme to ensure that they have the kind of home that they want.

One scheme of housing for the elderly, rather prosaically described as *Dwellings, Balham*, is one of the most extraordinary examples of neo-Victorian (or is it Albertian?) architecture to appear for a long time. The architects Pinchin and Kellow sound like a fairly Dickensian pair but their structure, set in the secluded garden of a south London Victorian house, has a liveliness and cosiness which deserves further exploration.

On the commercial front the scale and sheer bravery of building 300,000 square feet in two triangular glazed towers is something that seems to be confined to Singapore—John Clark Associates are the lucky architects. Civic offices in the North East at Chester-le-Street by architects Faulkner-Brown, Hendy Watkinson Stonor show how the high-tech principles can be adapted to make a new town hall a human and efficient place.

The firm of Powell and Moya have built one of the best looking branch banks for a long time—the National Westminster bank in Shaftesbury Avenue, London. It is in harmony with its neighbours and distinguished in itself. Offices for the new HQ of the National Farmers Union and the Avon Insurance Group at Stratford-upon-Avon are strongly classical in spirit—symmetry is all. This design is by and large, Queen's Award winning practice of Robert Matthew Johnson-Marshall and Partners.

It is hard not to be impressed by the neo-Grec new church for Glasgow to be in harmony with that city's neo-classical tradition. Elder and Cannon have produced a design that has the power of an earlier period—it is a building to watch. It is also a pleasure to see the commended entry for the opera house competition at La Bastille in Paris by the British entrant Nicholas Hare—the only British entry that nearly won.

The whole view of contemporary architecture is shown in this timely exhibition and it is a broad and catholic selection. There is nothing that really lifts the heart but there is plenty there that encourages murmurs of approbation. British architects, as I have often said in this column, have a great deal to offer—much of it is in this exhibition but not all.

BBC Symphony/Festival Hall & Radio 3

David Murray

Serenely tender as they are, the Four Last Songs of Strauss are scored ripely enough to risk smothering their soprano—in the concert hall at any rate, as music-lovers who know the songs from recordings are often sad to discover. Sheila Armstrong's performance with Günther Herbig and the BBC Symphony on Friday carried beautifully, as broadcast on Radio 3; what seemed to be a dearth of real orchestral *pianissimo* may have mattered more in the Festival Hall, or perhaps the radio effect was deceptive. In any case Miss Armstrong soared rapturously, and in *piano* preserved an exact line with that irresistible hint of tremulousness which is her special mark. Long phrases finely sustained; no very close attention to words, but full understanding of the sense and shape of each whole song.

Th exquisite violin solo in "Beim Schlafengehen" went to Rodney Friend, who gave it a personal voice—not sentimental—beyond the statutory elevated quality. Herbig was a careful accompanist, a little inflexible where the lyrical progress of the music would have licensed a quickening or a hesitation; but he was notably sensitive to the logic of Strauss's harmony, which less faithful conducting can reduce to mere strings of lush chords.

His account of Beethoven's "Eroica" Symphony displayed the same sturdy character beneath an appropriately different manner. Solid grasp of Beethoven's ground-plans, firmly tapped home without lingering over details (such things as the exuberant new decorations in the first-movement recapitulation got no special treatment): the whole *Marcia funebre* got an imposing weight despite the major-key passages that came riskily near a trot, and the Finale was determinedly urgent and bracing. The horns distinguished themselves.

Webern's Six Pieces op. 6 (played here in their original version for very large orchestra, which offers extreme contrasts of density) were delicately balanced and expounded at impeccable tempi. The expressive burden of this music, sparsely laid out as it mostly is, relies particularly upon the first-desk players. If the first trumpet sounded too gingerly to carry conviction in his quiet utterances, the horn and flute solos were persuasive and shapely. Here and there some sudden reversal in the music seemed under-dramatised—but perhaps the fraught atmosphere of the pieces was more palpable in the hall.

New London Chamber Choir/St John's, Smith Square

Dominic Gill

It is quite incomprehensible that this splendid group—one of the best amateur chamber choirs anywhere today, and by miles the most adventurous—should ever be giving concerts to half-empty halls. It is two years since the New London Chamber Choir was formed by its founder-director James Wood; but good news sometimes travels slowly. I urge all lovers of polished, intelligent, exciting vocal music-making to attend their next concerts, also at St John's, on November 19 and February 26.

Since the start, James Wood (who in his other musical role is a noted percussionist) has used the same programme receipe, which works very well: modern choral works contrasted with masterpieces from the Baroque and Renaissance, sometimes linked by a theme, sometimes not. Thursday night's programme was all French, and opened with the marvellous *Miss pro defunctis* of Pierre de la Rue (c.1460-1518)—one of the earliest surviving Requiems (only Dufay's setting, now lost, and Ockeghem's, pre-date it). We can never know exactly the articulations and timbres the composer himself imagined; but this performing edition, newly prepared but unattributed, captured much of its tranquil, ardent magic. The polyphonic canvas is broad and delicate, and the rhythmic interplay exceptionally subtle. The choir gave the music with devotion, and with an infectious sense of *fresh discovery*.

The evening's second half came from 20th-century France. Debussy wrote his *Trois chansons de Charles d'Orléans*, at least, around the turn of the century, and Messiaen his *Cinq rechants* just after the second war: virtuoso essays both, which the choir tackled, for an amateur group, with remarkable vigour and confidence—but was there lacking all the same a certain edge to the timbre which would not have come amiss either in the de la Rue? (I have very clearly in my mind's ear the instrumentally-coloured, sweet and slightly reedy voices of the Solistes des choeurs de l'ORTF, which lend the *rechants* especially a guilty frisson of indulgent sensuality missing here.) No matter: the projection, and the musical sense, were faultless. Their finale was Iannis Xenakis's new (1982) *Pour la paix* in its short, unaccompanied version: a heady and powerfully effective piece of vocal sound-painting which I hope the choir will polish up to a fine shimmer and keep in their repertory.

His Masters Voice/Half Moon E.1.

Antony Thorncroft

A century ago one of the minor miseries about being poor in the East End was having to endure a patronising sermon from the curate at the local mission hall if you wanted to enjoy the free cup of cocoa and the sing song. Nothing has changed in the Mile End Road.

His Masters Voice is a rousing musical by David Anderson quite sunk by the little Marxist homilies with which the cast, looking suddenly serious, peppers the audience at the end of the show just to make sure it knows its place. The big change in a hundred years is now it is mainly middle-class mouthing to middle-class while the locals are across the road in the disco enjoying all the things the Half Moon deplores, in this case popular music.

The simple story line involves Wally Burke (Gary Shall), a green-haired punk who is spotted by Steve X Hippy (Richard Marradine) and offered a recording contract and the chance of success. Wally's girl friend Julie (Michelle Collins) is having none of it. He must not desert his class: music is the only god the punks have and by converting it into records you are selling out to big business.

Of course everyone is a caricature and no opportunity is missed of bashing the bourgeoisie. There is little logic, no argument, but the music, while rarely being punk is generally very good. Anderson uses the conventions of the musical when he can't think of anything better—the opening number, solo spots, the big ballad, the dream sequence — but *His Masters Voice* is best enjoyed as eight talented musicians who can also act putting on a lively show around a cockeyed theme.

At least one of the songs, the closing reggae number "Don't buy it," demands a bigger audience. It should be recorded and promoted. Oops, sorry.

Rebecca/Grand, Leeds

Max Loppert

Gillian Sullivan

In its fifth season of existence, Opera North (with sponsorship from Schweppes) mounts its first new opera — *Rebecca*, music by Wilfred Josephs, libretto by Edward Marsh after the famous Du Maurier novel. Saturday's première was a big success with the home audience, whose lusty cheers at the end were clearly unfeigned—a happy contrast to the fate of many new operas. The success is deserved. The work, limited in style and content, is nevertheless a real piece of lyric theatre: it *feels* like an opera, not like yet another bloodless post-war "operatization" of a well-knwon book or play.

Strange, it seemed afterwards, that no *Rebecca* opera had been tried earlier. The novel now reads as a deftly orchestrated, perfumed, and rather distasteful thriller (whose underlying message seems to be that the soundest way to deal with a "bad"—ie sexually liberated—woman is to put a bullet through her), but it certainly affords the combination of strongly outlined plot, high-stormy emotional entanglement (with the dramatic impingement of the past upon the present), and picturesque locale that is one feasible recipe for romantic opera. After further existence as play, film, and television adaptation *Rebecca* is, of course, material familiar to very many people in the average audience; but familiarity, in the right circumstances, does no harm at all.

With considerable expertise *the main events and characters* have been martialled into three acts and five scenes of attractive shape and contrast of incident. Dialogue and soliloquy are for the most part very well "heard," with just the right sort of key phrase available to the composer for dramatic repetition or to set a concerted number (such as the pre-party quartet in Act 2) going. Mercifully, there is no attempt to transcribe into lyrical effusion the opening description of Manderley—atmosphere is left to accrue in the orchestra, and if, as a result, *Rebecca* the opera is relatively lacking in a sense of place, that is a loss made good in Colin Graham's excellent production. A doubt concerns the denouement: as in the film, suicide and not murder forms the basis of revelation, weakening the spring of suspense on which the plot functions.

Josephs is a widely experienced and prolific composer; yet this is his first full-length opera. It does not seem like it. Pacing, the graveyard of so many first attempts, is extraordinarily assured, above all by a knack of bringing each scene to a definite and well-prepared close—nothing dribbles on beyond its time. Josephs has also shown himself adept at finding apt and fruitful musical imagery in which to convey and contrast the central opposition of the plot: a stark major-seventh motif for Rebecca's insinuations, for the plight of "She" (as the second Mrs de Winter continues to be addressed) a sweet-sour phrase climbing through an octave, then upwards, only to fall back with a sigh. The developments of both are genuine, their appearances never blatant—this opera really *exists* in its music.

And the music, it has to be said, far more than the novelettish subject matter, is also the source of its limitations. For on first encounter the score seems to offer no intrinsic interest that might gratify repeated hearings. The language, strongly tonal, admits its influences with skill and wit—Poulenc in mood both lively (the opening Monte Carlo scene a direct appropriation from *Les [illegible]iches*) and lyrical; Britten for the art of growing ensembles out of the dramatic moment; Bartok for eerie dissonance and the "noise" of the final conflagration. The vocal writing, gratefully placed, cleaves to the text (few new operas are as easy to follow from the singers' mouths). But little sticks to the inner ear as original invention, as fresh use of well-tried formula. Perhaps intentionally, the ambition of this *Rebecca* is confined to success as an entertainment.

That much it fulfils; indeed, it is a gift to a young company, and Opera North has seized it. *David Lloyd-Jones is always* at his best conducting new operas; Saturday's performance was unflagging. The designs, by Stefanos Lazaridis, make vivid use of a vestigial grand staircase for all the locations — its jerky movement rather interrupted the climax of Act 2, but this was the single moment of awkwardness in an otherwise superbly economical *mise-en-scène*. And from his cast of 11, including the most minor players, Mr Graham has drawn quick, unexaggerated characterisation.

It is an admirable cast. From Gillian Sullivan as the heroine comes a performance bound to win her wider fame: rounded, even interesting, as a character and sung with a radiant freshness that is never forced. Peter Knapp as Maxim de Winter is a subtle actor and an agreeable, well-groomed singer; the role of Mrs Danvers (who is perhaps the real tragic heroine of the piece) affords Ann Howard one of her most brilliantly controlled portrayals, miles removed from predictable ogress antics. A word only for Nuala Willis in a lovely cameo of Mrs Van Hopper, for Linda Hibberd, Thomas Lawlor, and Malcolm Rivers. There is a Radio 3 broadcast tomorrow evening.

Mobil gives £25,000 to Film Archive

This week Mobil will hand over to the British Film Institute a cheque for £25,000 to help the National Film Archive in its costly and arduous task of transferring nitrate films to safety film. Most 35mm films made before 1951 are on nitrate stock and are becoming increasingly dangerous as well as disintegrating. Unless they can be restored the UK's film heritage could quickly disappear.

Mobil gave £25,000 to this *sponsorship last year and* approaching 17 films have been saved as a result. Two are to be shown at the National Film Theatre on Wednesday, *Moscow Nights*, starring Laurence Olivier, which was badly received in 1935 but is now becoming a cult, and *The Jewel Thieves Outwitted* of 1912.

The National Film Archive has 170m feet of nitrate film to convert.

Arts Guide

Music/Monday. Opera and Ballet/Tuesday. Theatre/Wednesday. Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

Music

October 14–20

LONDON

London Symphony Orchestra, conductor Yuri Simonov, Henryk Szeryng. Violin: Tchaikovsky (including Violin Concerto), Beethoven. Royal Festival Hall (Mon) (928 3641).

English Chamber Orchestra, conductor Charles Mackerras, John Lill piano: an all-Mozart programme. Queen Elizabeth Hall (Mon) (928 3641).

Young Musicians Symphony Orchestra, conductor James Blair, Andrew Shulman, cello: an all-Elgar programme. Barbican Hall (Mon) (638 8891).

Royal Philharmonic Orchestra, conductor Charles Groves, Cristina Ortiz, piano: an all-Beethoven programme. Barbican Hall (Tues) (638 8891).

Yehudi and Jeremy Menuhin playing Brahms sonates for violin and piano. Royal Festival Hall (Wed) (928 3641)

Dimitri Alexeev piano recital: Prokofiev, Ravel, Chopin. Queen Elizabeth Hall (Wed) (928 3641)

New Symphony Orchestra with the Band of the Coldstream Guards, conductor Kenneth Alwyn, Lydia Mordkovitch, violin: all-Tchaikovsky programme, including the Violin Concerto in D and the 1812 Overture. Barbican Hall (Wed) (638 8891)

London Oriana Choir with the London Baroque Orchestra, John Ogdon, piano, and soloists Fiona Dobie, Margaret Cable, William Kendall, Roderick Earle, conducted by Leon Lovett in an all-Mozart programme including Mass in C minor. Barbican Hall (Thur) (638 8891)

Lydia Mordkovitch, violin, Peter Donohoe, piano: Beethoven, Shostakovich, Stravinsky, Franck. Queen Elizabeth Hall (Thur) (928 3641).

PARIS

Academy of Ancient Music with Christopher Hogwood as conductor and harpsichord soloist, Patricia Kwella, soprano: Vivaldi, Handel (Mon). Théâtre des Champs Elysées (723 4777).

Ensemble Orchestral de Paris, conducted by Jean-Pierre Wallez, Elena Vassilieva, soprano, Jadwiga Rappe, alto, John Elwes, tenor, Gregory Reinhart, bass with "Orfeon Pamplones" Choir: Bach's Mass in C Minor (Mon). Salle Pleyel (563 8873).

Chamber Music – the Twelve Violins of France, Contrebass Quattuor, Cello Quattuor and musicians from the Orchestre National de France (Mon). Salle Gaveau (563 2030).

Nouvel Orchestre Philharmonique conducted by Rolf Reuter, Peter Roesel, piano: Beethoven, Brückner (Tue). Radio France, Grand Auditorium (524 1516).

Claude Helffer, piano: Debussy, Boulez, Schumann (Thur) Salle Gaveau (563 2030).

NEW YORK

New York Philharmonic (Avery Fisher Hall): Zubin Mehta conducting, Izhak Perlman, violin, Joseph Robinson, oboe. Bach, Saint-Saëns, Varese (Tue); Zubin Mehta conducting, James Vandemark, double bass, Harvey Pittel, saxophone. Debussy. Menotti: Double bass Concerto (world premiere) (Thur). Lincoln Center (874 2424).

Merkin Hall (Goodman House): St Luke's Chamber Ensemble: Copland, Francaix, Pasquotti, Fennimore (world premiere) (Tue); Music Today, Gerard Schwarz conducting: Busoni-Schönberg, Webern, Davidovsky, McKinley: Symphony (world premiere) (Wed); John Walz, cello recital: Frescobaldi, Beethoven, Martinu, Brahms, Chopin (Thur). 67th W. of Broadway (362 8719).

Columbia String Quartet (92nd Steet Y): Carter, Schönberg, Bartok (Tue). 1395 Lexington Ave (427 4410)

WASHINGTON

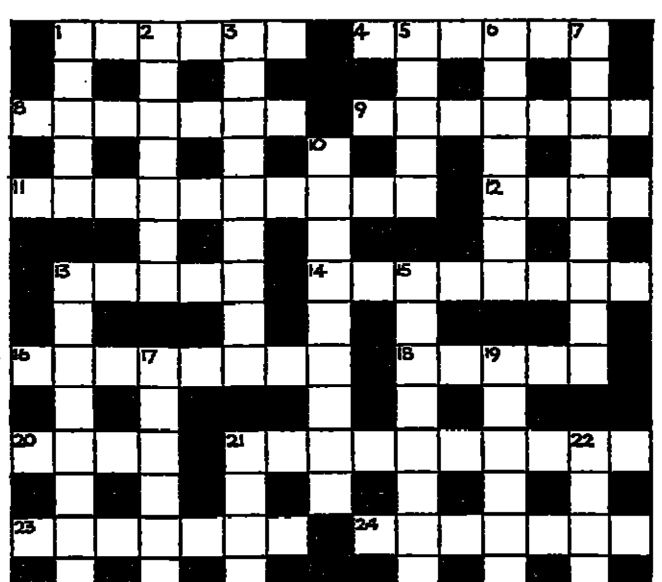
Shura Cherkassky piano recital (Terrace): Bach/Busoni, Schumann, Berg, Liszt. Kennedy Center (254 9895).

Concert Hall (Kennedy Center): Philadelphia Orchestra, Riccardo Muti conducting, Anthony Gigliotti clarinet: Maderna, Mozart, Tchaikovsky (Mon); National Symphony, Erich Leinsdorf conducting: all-Brückner programme (Tue, Wed, Thur). (254 3776).

BRUSSELS

American Chamber Symphony Orchestra, conductor Rober Frisbie with Marielle Nortmann, harp: Weber, Beethoven. Palais des Beaux Arts (Thur).

F.T. CROSSWORD PUZZLE No. 5,244



ACROSS

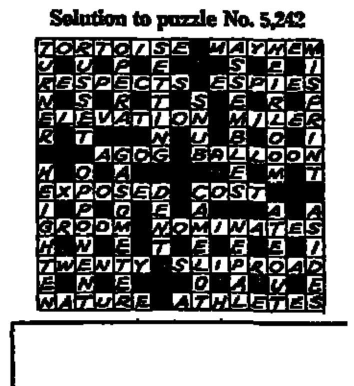
1 Lost one's temper with a guard (6)
4 Calms down a wild beast (6)
8 Self-sacrifice (7)
9 Disturbance in court, perhaps (7)
11 Gambler to part with wife? (6, 4)
12 Formerly in older style (4)
13 Took a ride round the Wild West show (5)
14 Remote chance a sniper may take (4, 4)
16 Unnatural red stain perhaps (8)
18 A view that makes sense (5)
20 Be mother for the French (4)
21 Worker in Biblical community went to America (5, 5)
23 Deny a saying is wrong (7)
24 King of Judaea has a hold on father (7)
25 Makes it correct for me to be in tails (6)
26 Its inside can be a bore (6)

DOWN

1 The way to get out and about outside (5)
2 Spurred on hearing hostelry is nigh (7)
3 I wondered about getting a quilt (9)
5 It may be called rough and hearty (5)
6 Ties the rest in knots (7)
7 Come to a sudden conclusion (4, 5)
10 Botched verdict on one who has been cruelly swindled? (5, 4)
13 Logical reason to restrict beer (9)
15 Lost again, maybe, and longing to get home (9)
17 Put some notes in order? (7)
19 Large ice formation — or not quite (7)
21 Dignified way to help (5)
22 Drive for mile trip round pithead (5)

The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.

Solution to puzzle No. 5,242



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Monday October 17 1983

Germans go on talking

ON THE FACE OF IT, East and West Germany are pulling off a remarkable trick this autumn. As the general East-West dispute over intermediate range nuclear missiles follows a grimly predictable course, relations between the two German states seem to have become warmer than ever before.

There can be little surprise over the latest skirmishing on the missiles issue. The Warsaw pact countries have again tried to persuade the West to give up its pledge to deploy new American rockets in Europe towards the end of this year if the Geneva negotiations fail. The anti-deployment movement in West Germany has begun its long scheduled round of demonstrations as punctually as a German train. In Vienna the Soviet and West German Foreign Ministers, the two most experienced professionals in the diplomatic trade, probed this weekend for chinks in one anothers armour, but evidently found none. As things stand, agreement in Geneva remains highly unlikely this year and the first Pershing-11 missiles will therefore probably be in West Germany by Christmas.

Friendly contacts

Against this background, the flurry of friendly contacts between the two Germanys may look very odd. The East German leader Herr Erich Honecker has been receiving a stream of high West German visitors—from that fierce Conservative critic of the Communist East, Herr Franz Josef Strauss, to the Social Democrat co-architect of the "Ostpolitik," Herr Egon Bahr. The talks have brought quick results. Bonn has guaranteed a DM 1bn bank credit for the East. Herr Honecker has agreed to the dismantling of all the self-firing shrapnel weapons East Germany deployed to help stop its citizens escaping across the border; modest new steps have been taken to ease visits by West Germans to the East and to improve co-operation in fields including environmental protection; and more moves are promised.

The Bonn Government's interest is quite clear. It wants to improve the lot of the 17m Germans in the East and to keep the door open for eventual reunificaton, an aim to which it is committed under the constitution. The only possible surprise is that a centre right coalition is now pursuing this course with, if anything, even more vigour than its centre left predecessor, which it often accused of kow-towing to the East. But what are Herr Honecker's motives?

One point is that the Soviet carrot-and-stick strategy to try to stop Western deployment the East Germans have been detailed to dangle some of the most tempting morsels in front of Bonn. West Germany is thus being shown that glowing prospects there can be for inter-German relations, providing it does not accept new American missiles on its territory, and spoil everything. But, even apart from fulfilling Soviet policy demands, Herr Honecker has strong reasons of his own for trying to stop a new twist to the arms race and to keep his lines open to Bonn.

The first is that while he and Chancelor Helmut Kohl have many differences, they have one overwhelming factor in common. Their countries would be the first hit and probably obliterated in any future European war. New American missiles in West Germany might well be matched by more Soviet missiles in East Germany. Herr Honecker would love to see the West unilaterally drop its commitment to deploy, but failing that — like Bonn — his vital interest is to see a negotiated missiles agreement between the superpowers. And he is realistic enough to know that that must mean movements in Moscow as well as Washington.

Second reason

The second reason is that, more than ever, East Germany needs the big financial and economic benfits its special relations with West Germany involve. Given its domestic economic problems and the big repayments due on its heavy foreign debt, East Berlin will be looking for more credit before long. Under normal circumstances its prospects of obtaining "fresh money" would be better in Bonn than they would be elsewhere, and certainly far better than in Moscow.

Thus, although a serious deterioration in inter-German relations because of the missile issue would be deplored by Bonn, it would be more painful in practice for East Berlin. That is why Herr Honecker as well as Herr Kohl have been keeping the hand of friendship outstretched this autumn and it is why even if the missiles are deployed, as is likely, both German states will try as best they can to see that there will be no "ice-age" in their relations, only a temporary freeze.

A strategy for crime control

MR LEON BRITTAN has already, after four months as Home Secretary, put a personal stamp upon the conduct of the Government's policy on law and order.

The key to his approach is the word strategy. "We must not forget that the fight against crime requires a strategy," he told the Tory Party conference last week.

What Mr Brittan means is that he wants, simultaneously, to address all sides of the law and order equation. He has set up a crime prevention unit, plans to press ahead with the Police Bill to strengthen police powers, has introduced long minimum sentences and new parole rules for certain very serious crimes and has come up with a series of proposals which, he promises, will end prison overcrowding by 1990.

Mr Brittan's methodical style does, however, raise the question of whether it is possible to produce quantifiable strategies, with target dates and bar charts in the criminal justice field. To take an analogy Mr Brittan himself used in Blackpool: can the Government tackle the crime wave in the way it tackled inflation?

Erratic

The regrettable answer is that it cannot. For a start, crime statistics are, as Lord Chief Justice Lane once remarked, "mostly misleading and largely unintelligible." Although the number of offences recorded by the police rose from 1.7m in 1972 to over 3m in 1982, Home Office bookshelves sag beneath the weight of research papers which show that recording procedures are so erratic that the figures prove little.

So what would winning the war against crime mean? An end to the rising curve in the police figures? If so, the Home Office has already won, since figures for the first half of this year show a fractional drop on those for the first half of 1982.

We are on even shakier ground when Mr Brittan tells us that sentencing patterns and parole entitlements must change in order to restore flagging confidence in the judicial system. What evidence is there for such a loss of confidence? Mr Brittan certainly produced none. As for the popular idea that tougher sentences might help prevent crime, Mr Brittan knows the evidence is so weak that he did not even bother to advance the argument.

So it is clear that the new minimum 20-year sentence for certain murderers and the loss of the parole possibility for some violent offenders is not part of any measured or measurable strategy. It is a response to the instincts of a section of the Tory party and one which must be judged against the view of prison officers that without the ability to offer incentives to better behaviour, prisons will be harder to manage.

Cell space

Nor, as a matter of general principle, can it be right that prisoners coaxed for many years through the pipeline of a system that trades remission for positive behaviour should find the pipeline suddenly blocked by Mr Brittan's fiat. The Home Secretary already possesses the power to review the release of all life sentence prisoners and he should have stuck to that.

His proposals to reduce the number of petty offenders in prison on the other hand are overdue and welcome, as is his pledge to accelerate the prison building programme.

But we doubt whether the measures announced so far provide an answer to the Parkinson's Law of prisons—that courts will always fill more than the number of places available. More radical measures, perhaps involving legal minima for cell space per prisoner, will be needed if the 1990 target is to be met.

RESTRUCTURING EUROPE'S STEEL INDUSTRY

The German foundation shakes

By Peter Bruce and Ian Rodger

DISARRAY IN West Germany's once powerful steel sector has suddenly emerged as a major threat to the long and painful programme to restore the European Community steel industries to commercial viability by the end of 1985.

The collapse last week of merger negotiations between Thyssen and Krupp, the two largest German steel producers, marks the latest of many failed initiatives to restructure the German industry in line with reduced market prospects.

The immediate worry is that the Germans' inability to agree among themselves on mergers and capacity cuts will also make it difficult for them—formerly the market leaders—to continue co-operating in the delicate arrangements to restraining production in the Community. These are due to be renewed at the end of January.

If the production and sales quotas are not renewed, there could be a chaotic scramble among European producers for market shares which would lead to the undermining of the whole steel revival plan.

Nervousness about this unlikely but fearsome outcome is believed to be one of the factors that has led to an unexpected recent weakening of many steel product prices. EEC prices generally are now well below those prevailing in the U.S. and Japan.

"Things are a bit anarchic at the moment," says M Jacques Michel, deputy director general of Usinor, France's largest producer.

"We have a crisis of confidence that we have to overcome one way or another," adds Dr Dieter Spethmann, chairman of Thyssen, Germany's and Europe's largest steel producer. "Only with confidence will prices rise."

One reason confidence has gone is that the German producers have lost leadership of their own market. West Germany accounts for about a third of EEC steel consumption, and prices set in this market have a strong influence on those elsewhere in the Community.

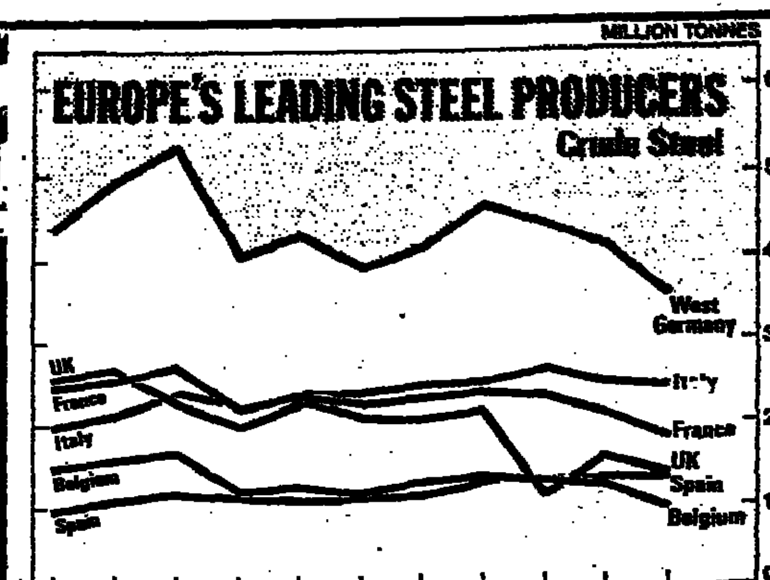
Until recently, the German producers dominated their home market and so could impose some discipline on the Community as a whole. But the relentless rise of competition from government subsidised producers elsewhere in Europe and around the world—producers who are generally less concerned about maintaining price than maintaining employment—has gradually sapped the Germans' strength.

The share of imports in the German market has doubled in the past five years to over 40 per cent, and it is higher in some key products.

"The Germans no longer control prices in their own markets," one industry analyst says.

"Everyone is a price leader now," adds an Italian steel industry official.

Meanwhile, their loss of market share has left the Germans with huge excess capacity—now about 70 per cent above current production rates of 37m tonnes per year. This, together with low prices, has undermined their financial strength, making it difficult for them to restructure even if they could agree on how to do it.



German producers have long resisted sharing in the EEC programme to cut capacity on the grounds that they were efficient, private-sector producers, while most companies in Britain, France and elsewhere survived only thanks to vast government subsidies.

Whatever the merits of such a stand, it was bound to fail as long as Germany was holding open house to every subsidised steelmaker in the world.

"We need further plant closures, further layoffs and further finance for modernisation," Dr Spethmann says. "But it is impossible now to attract private equity for steelmaking."

All this is a startling turnaround from the mood of confidence that was developing in EEC steel industry circles early this year.

Since the EEC steel market collapsed in 1980, the European Commission had made considerable progress, using emergency powers conferred by the Treaty of Paris, in re-establishing order. Quarterly production quotas were set and a price stabilisation system introduced. Prices duly recovered in late 1981 and early 1982, and last year a few producers, such as Thyssen and Hoesch of West Germany, actually made small profits on their steelmaking businesses.

However, the higher prices seemed to undermine the production restraint in some member countries in the second half of last year, as well as attracting more imports, at a time when actual demand was weakening. As the market appeared to be collapsing again, steel ministers met at Elsinore, Denmark, in November and reaffirmed their commitment to further substantial capacity cuts, leading to a restoration of commercial viability by the end of 1985.

The market duly recovered again, and producers were able to push through significant price increases last spring. As late as June, the European Commission was forecasting a modest upturn in demand in the third quarter.

In fact, however, prices across a broad range of products began to fall in June, especially on the Continent. British prices have apparently held up better than continental prices, partly because of stronger domestic demand than in some European countries, but British producers too are nervous about the immediate outlook.

Producers say prices on the principal flat rolled products—heavy plate, hot rolled coil and cold reduced sheet—are off anywhere up to 20 per cent on the West German market since June, with plate being the worst affected.

There are reports that plate, which was selling for about DM 860 per tonne, is now available for about DM 700.

In retrospect, a number of factors can be seen to have contributed to the current weakening of prices. It appears that the Commission, and others, overestimated EEC demand for steel this year, and so production quotas have not been restrictive enough.

A year ago, the International Iron and Steel Institute forecast EEC consumption for 1983 at 98m tonnes, up about 6 per cent. Now, it looks like ending down 3 per cent at 89m tonnes.

EEC producers have also had to adjust to selling lower volumes to the U.S. as a result of a restraint agreement reached a year ago.

The volume of imports from countries outside the EEC is supposed to be regulated by restraint agreements. But, as has happened before, a number of suppliers, notably Spain and South Africa, have tended to bunch their deliveries in the second half.

But most EEC producers acknowledge that the key factor in the current price weakness has been the growing tension over West Germany's contribution to the Community's restructuring programme.

Arguments over who should cut how much production and how much capacity are fairly regular events in the Community. Normally, the Commission assesses quarterly—after negotiations with the producers—how much steel each should make. The main producers then get together in their organisation, Eurofer, to decide on sharing output of particular products.

Last June, the Commission upset this process. Following on the commitments received from ministers at Elsinore last November, it published its decision on how much further capacity needed to be cut—and where.

Generally speaking, the burden was to fall heaviest on German, Belgian and especially Italian producers while French and British producers, which had already made substantial cuts, got off lightly.

A week later, the Commission reinforced its demands. The French and the British were to be offered fractionally higher production quotas starting next year as a reward for the progress they had already achieved in cutting capacity while the Germans and Italians were to have their quotas cut.

The leading Belgian producer, Cockerill-Sambre, has already announced it will comply with the Commission's demands and Finsider of Italy has indicated its readiness to make major cuts.

The problem arises with Germany. German producers are now resigned to the need for capactiy cuts, but they resent having their production quotas trimmed. Yet the other EEC steel producers are not inclined to be sympathetic to the Germans' sensitivities on quotas unless and until they see some evidence of progress towards restructuring the German industry.

Thus, the Eurofer members have been unable to reach agreement.

Continuing disagreement could lead to a breakdown of mutual confidence among producers, Dr Spethmann says.

The difficulties in resolving Germany's steel crisis stem from the reluctance of the Federal Government to provide subsidies, the reluctance of the state Governments to lose employment and the widely varying ambitions and resources of the five major producers.

Early this year, an industry-appointed commission proposed that the companies be combined into two groups, Thyssen and Krupp in the so-called Rhine group and Hoesch, Klockner-Werke and Peine-Salzgitter in a Ruhr group. Bonn later endorsed the principle of these mergers and their proposed restructuring by offering DM 1.3bn in aid provided that the state governments matched this contribution.

Unfortunately, the Ruhr group was stillborn when Hoesch flatly refused to talk to Klockner because Klockner refused to accelerate the depreciation on its huge Bremen wide strip mill.

Now the Thyssen-Krupp negotiations have broken down, too, apparently because Thyssen has refused to help absorb Krupp's DM 1.5bn of borrowings. Thyssen maintains that the talks are not at an end but points out the difficulty of assessing the value of steelmaking assets in a period when government controlled companies are so prominent in the industry.

"No private concern can survive in competition with the united finance ministers of Europe," Dr Spethmann said last spring.

Some of the German companies could well be delaying negotiations in the hope that pressures will build up to the point where the Bonn Government will have to buy the companies in order to achieve the necessary restructuring.

There has already been one recent bankruptcy in the German steel industry, that of Korf Stahl last year, and Klockner is deeply troubled. Also, other EEC governments are likely to get increasingly impatient about the Germans' lack of progress in restructuring their steel industry.

Producers are fairly confident that some sort of agreement will be reached in the next few weeks on the immediate issue of quotas.

"We have to sort it out," M Michel of Usinor says. "The alternative is chaos."

But the way to solving the overall problems of the German steel industry, and those of the European steel industries which it once led, is still far from clear. Experience in most other European countries does not provide encouragement to those who hope a government takeover will, by itself, solve much.

HOW THE EEC AIMS TO CUT BACK

Member state	Maximum possible production 1980 1,000 tonnes	%	Reduction commitments and closures realised since 1980 1,000 tonnes	Capacity cut-backs the Commission now wants 1,000 tonnes	Total capacity cutback 1,000 tonnes
Germany	53,117	31.6	4,810	1,200	6,010
Belgium	16,028	9.5	1,705	1,400	3,105
Denmark	941	0.6	66	—	66
France	26,869	15.9	4,681	630	5,311
UK	22,840	13.5	4,000	500	4,500
Italy	36,294	21.5	2,374	3,460	5,834
Luxembourg	5,215	3.1	550	410	960
Netherlands	7,297	4.3	250	700	950
Community	168,601	100	18,436	8,300	26,736

Greece and Ireland are not involved in the restructuring programme.

Source: EEC Commission

Men & Matters

Plymouth sound

Even by the larger-than-life standards of TV tycoons, Kevin Goldstein-Jackson, chief executive of Television South West, is gaining a well-earned reputation as a bit of a maverick.

From his Plymouth base, he makes constant sorties to tweak the noses of the barons of the ITV system and thumb his own proboscis at network policy. Irritation—and sympathy—is still spreading from his latest sally: his offer to buy Channel 4 from the Independent Broadcasting Authority for £1. (The IBA says it considered the offer carefully for a full second before declining.)

But behind the bluster, Goldstein-Jackson — at 37, the youngest of the 15 ITV bosses—says he has a serious point to make.

He believes the Channel is going for the wrong sort of minority audiences to secure commercial success. Where are the Channel 4 programmes equivalent to parts of the Investors Chronicle, the Economist and Financial Times? he asks. Where are their programmes for home computer owners? Or people learning a foreign language? Or seeking holidays abroad? Or newly-weds or fashion enthusiasts?

"These are all significant minorities that would draw increased advertising and improve the Channel," Goldstein-Jackson says, adding that he does not see why a television channel cannot be privatised if British Telecom can.

But it is the Welsh 4th Channel and the £386,400 that TSW has to contribute to it that really gets him excited. "It would be cheaper," he says, "to give the Welsh video recorders."

Goldstein-Jackson takes a very independent line, too, on programme scheduling. Last Christmas, TSW was the only ITV company to decline the film, The Black Hole. That decision misfired. The only film he could get to replace it was even worse.

TSW has also taken out full page advertisements in Marketing Week showing a rather timid heron—representing TSW—being eyed by five vultures. The vultures were not caricatures of the heads of the big five ITV companies, he asserts. They were just vultures and people could draw their own conclusions.

People did. Goldstein-Jackson, former assistant director of drama at Anglia, it was recalled, had not even worn a tie when he went to his first meeting with the ITV establishment.

"He has no proper respect for the powerful and the great—and maybe that's what we need," a senior independent television figure says.

Goldstein-Jackson started his career in the staff relations department of London Transport and then worked for Scottish Widows Insurance. They made the mistake of suggesting he went to university as a mature student.

He emerged from Reading University with a degree in philosophy and sociology and little further interest in insurance. The world of television has scarcely been the same place since.

Should he drop dead tomorrow, Goldstein-Jackson knows what epitaph he wants—Shaw's comment that all progress depends on unreasonable men trying to make the world adjust to them.

"I am," he points out unnecessarily, "a very unreasonable man."

Print out

Len Murray, TUC general secretary, was in sparkling form at the biennial conference in Brighton yesterday of the Engineers' and Managers' Association.

Some people, he said, still saw the trade unions as a bit like infants—"greedy at one end and uncontrolled at the other." But he would have none of that. Talking about a new role for the TUC, he reminded EMA delegates that "the TUC can reach parts individual unions cannot reach."

Murray went on to list the TUC's move towards a more cohesive structure, with fewer unions, as one of its main achievements.

Over the past 15 years, he pointed out, the number of print unions had been reduced from 11 to two, the National Graphical Association and Sogat. "And as we have threatened them both with expulsion this year," Murray added, "we may end up with none."

Bench mark

Lars Evander has taken another step in his task of developing Svenska International, the London-based subsidiary of one of Sweden's top three banks, into a flourishing UK merchant bank.

Svenska, of which he is managing director, became at midnight last night a licensed deposit taker, only 11 months after breaking away from the Nordic Bank consortium to go it alone in the capital and money markets.

Evander has already made his mark in Sweden. He became at the age of 23, possibly the country's youngest-ever judge. He had to seek a special dispensation to take up the post at Stockholm City Courts because the official minimum age is 25.

Those who appointed him were impressed by the international banking experience listed among his outstanding examination results and other qualifications. They noted that he had worked during one vacation for the then Westminster Bank in London. "What they didn't notice," says Evander, "was that the job was in the catering department. My banking experience extended to pouring out the wine in the directors' dining room."

The experience was enough to give Evander a taste for banking and, finding life on the judge's bench boring by the age of 26, he became assistant to the president of Svenska Handelsbanken, in 1980, he was posted to the Nordic Bank in London.

Still only 36, Evander has time for several more career changes yet. But building Svenska International will keep him occupied, he says, well, for a few years at least.

Cash cut

A cautionary tale for those who try to protect their fortunes from the ravages of Government taxes:

John Pearson tells in his book on the Cavendish family (Stags and Serpents, Macmillan) how Edward, the tenth Duke of Devonshire, cleverly arranged to have the bulk of his estate transferred into a discretionary trust to avoid the death duties imposed by the 1945 Labour Government.

The sole condition was that the Duke would have to live for at least three years for the trust to come into effect. But the Duke, in the best of health, had no fears about that—even when Sir Stafford Cripps increased the "quarantine" to five years.

A mere 14 weeks before the due date in 1950, the Duke (who, like Gladstone, had a penchant for felling trees) decided to tackle a smallish oak behind his house at Compton Park.

His efforts to bring down the tree caused a heart attack and he brought down the family fortunes instead.

Observer

SOUTH KOREA AFTER THE ASSASSINATIONS

The dangers that lie in wait

By Alain Cass, Asia Editor, recently in Seoul

SOUTH KOREA is today a country united by a shared sense of grief and outrage. In less than two months it has been dealt two grievous blows.

First there was the shooting down of the Korean Airliner with the loss of 269 civilians. Then, last week, a bomb exploded in Rangoon, the Burmese capital, killing 17 South Koreans including 11 of President Chun Doo Hwan's most senior officials.

The Government is accusing North Korea of responsibility for the bomb blast and for the moment most people here want retribution. On television scenes of the assassinated officials' funeral are shown again and again, mixed with newsreel and menacing feature films depicting North Korean troops on the march.

In the streets, demonstrators wearing brightly coloured headbands, burn effigies of Kim Il-Sung, the North Korean leader, and write protests in their own blood.

President Chun, himself visibly shaken by what appears to have been a nearly successful attempt on his life, is measuring his response. But it may amount to no more than rhetoric, even if it is confirmed that North Korea was behind the outrage.

The most powerful brake on South Korea will come from the U.S. which has 38,000 troops stationed there. Mr Caspar Weinberger, the U.S. Defence Secretary, will no doubt have reminded President Chun that a major incident along the heavily-fortified demilitarised zone between North and South Korea could trigger a full-scale, possibly a superpower, confrontation. The North is backed by both the Soviet Union and China.

President Reagan is expected to make the same point next month when he visits South Korea.

Even so, the U.S., like South Korea, is anxious to discover as quickly as possible who was behind the bombing. If the answer is North Korea—and many U.S. officials are privately hoping it is not—because they do not want another irritant in their improving relations with China—then the immediate future looks bleak.

Firstly, it would signal that North Korea has not, as some officials had hoped, entirely abandoned its policy of armed confrontation in the face of a firm U.S. commitment to the South and its increasingly well-armed and well-trained army.

Secondly, it would raise fears of further acts of terrorism, with the North trying to counter the South's efforts to win the war of international acceptance. As one Western diplomat puts it: if North Korea is responsible "it tells us that the North is frustrated beyond endurance because of South Korea's economic success and its increasing acceptance in the wider world. Since they would be faced with an insurmountable military challenge were they to invade, they turn to terrorism."

North Korean frustration must have intensified last week as President Chun set *off on his third major* overseas trip, which was to include three important non-aligned countries—Burma, India and Sri Lanka.

A further pointer to South Korea's growing acceptance on the world stage is the list of international gatherings it is to host: the World Bank meets here in 1985. The Asian Games will be held in Seoul a year later and in 1988 the Olympic Games are due to be staged here. All could become targets for the North's undoubted desire to destabilise the country.

If—and it is a remote possibility—the Rangoon bombing proved the work of South Korean dissidents, that would be an even greater blow to President Chun. He would come under irresistible pressure to abolish the limited reforms he has introduced on human rights and impose a harsh, military-style regime akin to that of President Park Chung-Hee who was assassinated in 1979.

Even if the bombing turns out to have been the work of Burmese guerrillas, aiming at their own Government, the tragedy leaves South Korea's leader with formidible problems.

For the bombing is only the latest in a series of misfortunes to have hit Chun's Government. Earlier this year there were two major financial scandals involving the country's biggest tourism and leisure business and a leading bank. These are still unresolved.

They followed uproar last year over South Korea's black money or kerb market when two prominent brokerage houses—one linked to the First Lady—crashed. As much as \$350m of now worthless promissory notes were involved.

President Chun Doo Hwan (left) and the funeral of his murdered Foreign Minister, Lee Bum Suk, in Seoul last week

With the exception of a brief period early last year when the former army general felt secure enough to lift the curfew this chain of problems goes back to May 1980. That was when troops put down a student rebellion in the city of Kwangju with great ruthlessness leaving dozens, possibly hundreds, dead.

Visible opposition is limited to banned political groups, intellectuals and students. But the regime, though less harsh than its predecessor, is not widely popular. President Chun has reinstated some rights suspended by his predecessor in 1972 but his pledge to step down in 1988 does not appear to be taken at face value by the dissidents. The middle classes in particular retain a strong democratic tradition.

Last year—and earlier this year—he faced demonstrations and a handful of hunger strikes, even though he had released several hundred political prisoners including Mr Kim Dae Jung, who is to South Korea what the late Mr Benigno Aquino was to the Philippines before his assassination last month.

President Chun now faces the task of rebuilding a shattered administration. South Korea, one of the most literate countries in Asia, in not short of talent. But the men who died were, by common consent, exceptional. They were also adept at presenting to the outside world a favourable image of an isolated country and an autocratic regime.

Above all, however, they were the men who had fashioned and were implementing, against considerable opposition, economic reforms of a fundamental nature. Without these, they believed, South Korea could not sustain the dazzling performance of the past two decades.

The two key figures killed in the explosion were Mr Kim Jae-Ik, senior adviser to President Chun and the architect of that policy, and Mr Suh Suk-Joon, who was appointed Deputy Prime Minister two months ago with the brief to push through the reforms.

Mr Kim, in particular, who told me when I last saw him that if Korean companies "went to the wall as a result, so be it," was the most powerful advocate of change.

Mr Kim was a realist. The patient was sick, he'd say, and therefore needed strong medicine. This was a view bitterly opposed by much of big business but widely shared by other economists, including the International Monetary Fund.

He recognised the achievements of the past 25 years: real growth rates of around 10 per cent a year: probably the single most successful export performance of any developing country since the war: the emergence after the oil price increases of 1973/74, of trading giants like Hyundai, Daewoo and Samsung to rival the mighty Japanese; the halving of the infant mortality rate in less than two decades.

But he also saw the less visible problems:

- Industries, such as shipbuilding, car manufacturing and heavy machinery, which had become inefficient and, in many cases, would have been virtually insolvent without indiscriminate financial support from successive governments whose only objective was growth at any cost. One of the consequences of this high growth policy has been a steadily rising foreign debt which, at \$38.8bn, is the third highest for a developing country (after Brazil and Mexico).
- A banking sector, largely Government-owned, and apparently unaccountable to anyone except a few officials in the Ministry of Finance.
- A financial sector hamstrung by excessive state inter ference and artificially low, fixed interest rates.
- An agricultural sector massively subsidised and consequently inefficient.

Mr Kim's prescription, which began being applied after President Chun consolidated his position in 1981, boiled down to reducing the role of government in the economy and enlarging the private sector.

He advocated an end to fixed interest rates and persuaded President Chun to sell the Government's stake in the country's banks. He called for the abolition of preferential loan treatment for certain companies and the lifting of Korea's extensive tariff and import control barriers to expose inefficient industries to foreign competition.

Mr Kim also wanted a bigger role for foreign investment. He even advocated pruning defence expenditure and, to the astonishment of his colleagues made some headway with the generals who, in South Korea, remain the ultimate arbiters of power.

His latest initiative involved a major revision of the current five-year plan in an effort to reduce inflation, and narrow both the fiscal and current account deficits. Mr Kim had an unusually close relationship with President Chun. "He was the man who explained economics to the general," said one colleague.

The medicine, aided by the recovery in the world economy, appears to be having the desired effect. During the first half of this year the economy grew in real terms by 9.6 per cent. Exports have picked up again, after three bad years. Inflation is down to around 2 per cent—compared with 5 per cent last year, 14 per cent in 1981 and 33 per cent the year before.

There has been a good harvest. The drop in the price of oil and effective energy conservation measures have helped cut the current account deficit to an estimated \$2bn at the end of this year, against \$5.3bn in 1980, \$4.6bn in 1981 and \$2.5bn last year.

Continued economic growth is vital for South Korea, not just for the health of the industrial and corporate sectors, but also to ensure continued political stability.

President Chun thus faces a challenge on several fronts at once. But none will be more important than completing the work that Mr Kim begun.

The structure of his new Government, announced on Friday, suggests he is going for continuity as well as consolidation.

Lombard

The world tax league now

By Samuel Brittan

THE FIERCE British public debate on whether to curb public spending to finance tax cuts has brought the international tax league back into fashion. How highly taxed is Britain, in relation to other countries?

The Chancellor told the Tory Party conference that Britain is the second most highly taxed of the Summit Seven (U.S., Canada, Japan, Germany, France, Italy, UK). This has come about because, since 1978, Labour's last full year of government, the UK tax-take has gone up by 5½ percentage points. Britain has, therefore, changed places in the tax ranking with Germany, which used to be number two.

The main reasons for the British jump are: (a) public expenditure, induced directly or indirectly by the severity of the UK recession; (b) the Tory commitment to increased spending on defence and police; and (c) the reduction in public sector borrowing as a percentage of Gross Domestic Product. The first two forces will be slow and difficult to reverse while it may not be desirable to reverse the third too much.

There is not space here to debate whether a lower tax-take is or is not the key to improved growth and employment. But the table does show Britain's place in the whole Organisation for Economic Co-operation and Development (OECD) league of most heavily taxed countries is much less high — ninth out of 23 — if a larger group is taken than that of the Summit Seven. Indeed, if we leave out some of the Mediterranean countries with little tradition of tax paying, Britain emerges near the middle of the league.

The table includes social security contributions, as any estimate of tax revenue properly should in the absence of actuarial links between contributions and benefits.

If one looks at the countries which clearly pay much more tax than Britain and those which pay much less, no very easy policy pointers emerge. The high taxpayers comprise the welfare states of Scandinavia and the Low Countries, together with France. These have had a reasonable post-war economic record, although some of them have encountered trouble in recent years.

The low taxpayers are a very mixed bag. There are obviously *successful countries, such as* Japan; but also to be found among them are Turkey, Portugal and Spain. The U.S. is pretty low in the taxpaying league. It has a reasonably well functioning labour market, but it has just experienced a decade of snail's pace productivity growth. Thus, simple international comparisons are no short cut to policy.

One outstanding difference between the UK and other countries is that a much smaller proportion of British revenue is collected in social security taxes. The so-called "national insurance contributions" which are not nearly enough to finance health and welfare spending,

TAX AS % OF GDP†

	1982	1978
1 Sweden	50.3	53.5
2 Norway	47.8	46.9
3 Netherlands	45.5	46.8
4 Belgium	45.4	44.2
5 Denmark	44.5	43.6
6 France	43.7	39.7
7 Austria	41.0	41.4
8 Ireland	40.5	33.4
9 UK	40.0	34.5
10 Germany	37.0	37.8
11 Finland	36.8	36.5
12 Canada	35.9	31.1
13 New Zealand	34.0	30.4
14 Italy	*33.7	32.6
15 Luxembourg	33.3	49.9
16 Greece	31.7	n.a.
17 Australia	*31.6	28.8
18 U.S.	*31.2	30.2
19 Portugal	31.1	26.1
20 Switzerland	31.0	31.5
21 Japan	26.9	24.1
22 Spain	23.8	22.8
23 Turkey	*19.3	22.5

* 1981 figures. † At market prices. Source: OECD

but which are popularly believed to do so, provide the worst of all worlds. But there is just as much a case for having one comprehensive income tax as there is for a full-scale social security tax, which lives up to its name. Wage earners are realistic enough to put all tax deductions together in complaining about their exactions; and a printed note in their pay packets telling them where their taxes go can provide any information required—on the doubtful assumption that they really want to know.

Letters to the Editor

Abolishing the metropolitan county councils

From The Leader, West Yorkshire Metropolitan County Council

Sir,—Your admirable leader (October 11) on the proposal to abolish the metropolitan county councils and Greater London Council has injected rationality into an area where the Government has become hopelessly confused.

The true issue is the problem of local government finance. The wrong answer to that problem is to opt for more and more centralisation. Consistent moves to take more and more power to the centre will bog ministers down with unnecessary details, sap the vitality of local government and, above all, destroy the checks and balances in what the Government rightly insists is a unitary state. The way is being paved for an autocratic government.

Governments suffer from a perpetual illusion that a problem can be solved by changing the structure of the body which deals with it. The White Paper on metropolitan counties is riddled with makeshift expedients. Joint boards with power to levy their own rate precept will take over the majority of the metropolitan counties' functions. The one rate precept of *the metropolitan county* council will be replaced by up to five levies. Most of the remaining power of the county councils will be assigned to a series of joint committees. Central government will take over some functions. The Arts Council will take over responsibility for major cultural institutions. One or two functions will even be given to a neighbouring shire county. This confusing, undemocratic and expensive hotchpotch can hardly represent an improvement on the present system, whatever its failings.

It is symptomatic of the haste with which the proposals have been developed that Parliament will be asked to transfer the counties' functions to a nominated joint board before legislation has even been brought forward for abolition.

As you rightly say, there is *an urgent need for a thorough* review of local government and its financing. The Government would receive wide acclaim if it were to commission such a study and postpone its present plans until it received the result.

(Councillor) John Gunnell.
County Hall, Wakefield.

Not jumping or falling

From Mr F. Walker

Sir,—When dealing with the things whereof they know I hold your staff writers in the highest regard and frequently come near to believing what I read—a comment which I would make about no more than two other British newspapers.

Why then must those same writers let both the FT and themselves down by striving to outdo the stylistic betises of their counterparts elsewhere—Mirroring, shall we say, the Sun—and using metaphors which are clearly outside their specialisms. And whatever their other compulsions could not your subs be requested for once to correct for style as well as length and thus, for a change, to add credibility while decimating column-inches—and I do mean shortening the article by 10 per cent.

On October 8 both Stuart Marshall and Lex went trawling *for quite unnecessary metaphor* on the continental shelves of atomic physics. They both fished up "quantum"; neither knew what to do with it.

As I am sure you are aware, a quantum of energy is the smallest, repeat smallest, amount of energy that can exist at any given frequency. A quantum jump is therefore the effect on any body—typically an electron in atomic orbit—receiving or giving up this minimum energy increment. A "quantum fall" in commercial interest rates as mentioned by Lex might be, say, 0.0001 per cent. Far from enough to stimulate sufficient excitement to make a marked difference in consumer demand.

Whether a "quantum fall" is identical to a negative "quantum jump" while an interesting semantic speculation need detain us no longer. We must needs pursue more elusive prey. I find myself unable to decide what Mr Marshall meant to convey by his asseveration that "The Regata . . . is a quantum leap compared with the 131." Is this the nonsense that I believe it to be or, being charitable, is it a comment on the relative resilience of the suspensions. *But if so, which is harder* and which softer?

Surely neither article can have been written under extreme time pressure. Well, not that extreme anyway!

F. M. F. Walker.
7 Cassiobury Park Avenue, Watford, Hertfordshire.

A path in the U.S. jungle

From the Managing Partner, Ogilvy and Mather

Sir,—The article by your New York correspondent Terry Dodsworth "Finding a path in the U.S. jungle" (September 21) offers good advice to all who are considering doing business in the U.S.A.

The biggest single problem is the unwillingness of so many foreign businesses to openly acknowledge that they need help. Outside expertise represents an added cost burden rather than a prudent investment; even to many of those whose business sense has allowed them to recognise the need exists.

Next is a completely unrealistic expectation of what can be accomplished here at what cost. A result of the scale on which the U.S. market operates in almost all industries.

The benefit of working with "a local team that knows its way around" is often difficult to justify in rational terms simply because the principals cannot cross the intellectual threshold which allows a questioning of their ability to succeed unaided.

A call for help often comes after some key decisions, sometimes costly irreversible decisions, have been made. The initial assignment then takes on more of the character of a rescue mission than a business development process. Result: it takes longer and costs more to accomplish the same.

"Being prepared to buy (local) expertise" may appear to some of your readers as rather fundamental, perhaps unneeded advice, but they should be assured that in the long run it is almost always the least expensive, most successful way into the U.S. market.

A. J. F. Manton.
380, Madison Avenue, New York, NY 10017.

Make Linwood a free port

From Mrs P. Gibb

Sir,—The sad story of the Linwood closure created international shock waves. Worse, the repercussions of the local disaster appeared to obscure possibilities inherent in direct Government intervention.

Today, despite the sorry sight of weather-beaten for sale notices a positive statement must be made. Left behind remain about 3m square feet of well constructed modern buildings, plus considerable expanse of adjacent development land all within minutes of Glasgow Airport and the city itself.

Marketing philosophy suggests finding the right tenant to suit the location. There is desperate need to exploit this philosophy in Linwood where approximately 15 per cent are unemployed.

As a result of trade intervention the Government is committed to study applications for UK-located free ports, based on criteria of evidence of trade demand coupled with evidence that the free port would operate economically without Government assistance.

With ready-made accommodation, and ample labour supply in Linwood itself, a railway built into the complex, immediate access to motorway communications, a major and apparently expanding airport nearby and a situation in the heart of the industrial and commercial belt of Scotland well served by every shipping facility—is this not a natural choice for Scotland's free port and the ideal opportunity presented to remedy the running sore of unemployment in at least one area of regional deprivation?

(Mrs) Patricia M. Gibb.
14 Mirrlees Drive, Glasgow.

An error built in to the NHS

From Mr D. Booth

Sir,—The admirable article (October 8) on the National Health Service by Messrs Hargreaves and Griffiths—and your many correspondents—appears to omit the error in costing which was built into the whole NHS system from the outset in 1946.

All of the welfare provisions and benefits stemmed from the Beveridge report of 1942. In para 27 of the report Beveridge showed that costing was calculated at 25 per cent above 1938 prices. Later Treasury statistics showed that 1946 prices were 55 per cent above 1938. All subsequent calculations were therefore based on a built-in shortfall of 30 per cent.

It would seem that the first task of any reforms is to remove the basic costing error where it applies.

D. J. Booth.
Ivy Cottage, Waterditch, Bransgore, Christchurch.

FINANCIAL TIMES

Monday October 17 1983

Terry Byland on Wall Street

Doubts on prognosis for drugs

THE RENEWED vigour of Wall Street in the early weeks of this month brought several of the more conventional sectors of the market back into the centre of the stage previously occupied by the more glamorous high-technology stocks.

Pharmaceuticals, having lagged behind the rest of the market, turned in some star performances in September and October. But a closer look at the stock prices suggests that the stars may have distracted attention from a more bearish underlying tone.

Merck, for example, is still the favourite of investors in pharmaceutical stocks and played a significant role in pushing the Dow Jones Industrial average ahead over the two month period. Merck gained 6.7 per cent, with the Dow putting on only 4 per cent.

But Merck is the sole representative of the pharmaceuticals industry in the average, and stock in Eli Lilly, lagged behind the average over the period, while G. D. Searle and SmithKline Beckman actually fell back.

Wall Street analysts consider the Standard and Poor's 400 and 500 indexes to be more suitable as a basis for comparison with pharmaceutical issues. The S & P 400 gained only 3.3 per cent over the two months, but even so, drug stocks underperformed.

An unweighted index of 13 drug stocks compiled by Shearson/American Express was showing only a 3 per cent gain for the month of September.

One reason may be that stock prices are already discounting the expectation of widespread gains in share earnings in the current year. Wall Street forecasts range from gains of 29 per cent at Pfizer to 13.9 per cent at Bristol-Myers, 9.6 per cent at Merck and 11.6 per cent at Eli Lilly.

Third quarter earnings, to be announced over the next fortnight, should vindicate this optimism, or, to put it another way, the market will be disappointed if they do not.

A major factor behind the latest buying of Merck and Pfizer is the belief that the U.S. dollar may be about to fall, bringing a major boost for these two overseas earners. But even on this point, opinions differ. Both companies have been hurt by the volatility of Latin American currencies and a fall in the dollar will not in itself solve this problem.

If the prospects for the dollar are not in themselves sufficient justification for the hope of further gains in pharmaceutical stocks, then the sector could be leaning too heavily on the "catch up" argument.

At the end of September, when the S & P 500 showed a gain of 18 per cent since the beginning of the year, only a handful of favoured drug stocks could outmatch it.

Bristol-Myers, strong both in the U.S. and abroad in anti-cancer drugs, and backed up by Wall Street forecasts for this year's earnings, has continued to move up since. But G. D. Searle, for which a fall of 4.3 per cent in share earnings this year is predicted by Mr Neil Sweig of Shearson/American Express, has dropped out of the running, with its stock down five points since the end of August.

Over the nine month period, even such stocks at Pfizer, Merck and Squibb were slightly behind the S & P 500 and thus had room to make up ground when the market turned higher again.

The dependence of the sector on the "catch up" argument has fuelled doubts among some analysts who suggest that the apparent firmness of the past few weeks should be regarded as an opportunity to sell rather than buy stock.

Shearson/American Express believes that "very few drug stocks will be superior investment to the S & P indexes over the next six months or so." The brokerage house suggests that even such relatively good performers as Bristol-Myers, Merck and Pfizer might be seen as short-term selling opportunities.

Ms Susan Thrasher at Salomon Bros has recently lowered her ratings on both SmithKline and on Schering Plough to "m" – which means, significantly, "likely to match the S & P index." Schering Plough has made a significant commitment to the much favoured growth area of genetic engineering, but Ms Thrasher believes that at 12 times earnings, the stock has well discounted such prospects.

On present Wall Street forecasts, the whole of the sector seems generously priced. Historic p/e ratios of 18 for Merck and Pfizer, 17 for Squibb and 16 for Bristol-Myers, all compared with a prospective 11 on the S & P 500.

At these levels, it may be time for the buyers of the pharmaceuticals sector to take a rest for a while.

Spain halves plans for nuclear reactors

BY DAVID WHITE IN MADRID

HALF OF Spain's programme for further nuclear reactors is to be shelved under a new target approved by the Socialist Cabinet.

The Government is aiming to limit installed nuclear capacity to between 7,500 and 7,600 megawatts in the early 1990s. This compares with 12,500 MW provided for in a 19-year plan drawn up in 1979.

The decision confirms the scope of the cutbacks outlined in the Socialists' electoral platform last year, aiming to limit the development of nuclear power to the country's energy needs.

Spain currently has five nuclear reactors in operation, with a combined capacity of just under 3,000 MW. The new target implies that out of a further 10 units under construction or authorised, five will be postponed or abandoned. The new reactors all have planned capacity of 930 to 1,000 MW.

Sr Carlos Solchaga, the Industry and Energy Minister, said the Government had not yet decided on the list of projects to be stopped or postponed.

There was speculation, however, that the Government might now shelve the twin-reactor Lemoniz project in the Basque country, which has been paralysed as a result of terrorist action by the Basque separatist organisation, Eta. The Government has taken over responsibility for the plant from the private-sector Iberduero utility, and is awaiting a report from its management committee

The cutbacks are expected to hit another twin-reactor site at Valdecaballeros in the Badajoz region adjoining Portugal, where construction work is already at an advanced stage.

Sr Solchaga said that the choice would be made strictly on the grounds of either economy or safety.

The new nuclear plan is geared to expectations of 4 per cent annual growth in Spanish electricity demand up to 1992.

It is the third time that Spain has scaled-down its nuclear ambitions since the mid-1970s, when it was envisaged that the country would have an installed capacity of 22,000 MW in 1985. Under the original plan, based on high economic growth rates, Spain would have had 18 reactors in operation by the end of this year.

W. German Protestant pastors criticise nuclear missile plans

BY LESLIE COLITT IN BERLIN

PROTESTANT PASTORS in several West German cities and towns spoke out yesterday in church services against the stationing on German soil of new American nuclear missiles. Anti-missile demonstrations were held outside U.S. military installations in West Germany and, for the first time, in West Berlin.

Some 20,000 anti-nuclear supporters took part in a rally in Bremerhaven on Saturday. The rally ended three days of protests there near the U.S. Army's Carl Schurz barracks, which was sealed off by riot police.

The largely peaceful demonstrations became violent on Saturday evening when some 200 demonstrators headed towards the barracks in the port area and clashed with the police at a road barrier.

Both sides reported injuries and 100 demonstrators were taken into custody.

In West Berlin, 6,000 mainly young people took part in an attempted blockade of the entrances to a U.S. Army barracks in the city after the U.S. commandant invoked a ban on the blockade. It was the first time such a protest was held outside a U.S. military installation in West Berlin.

The city's conservative governing mayor, Richard von Weizsäcker, and all political parties except the left-wing Alternative List and the Communists criticised the protest as harmful to the city.

American officials in Berlin said they supported the right of the demonstrators to express their opinions but were worried about the impact on public opinion in America of television coverage showing young Germans demonstrating against the U.S. Army in West Berlin.

Some 300 young demonstrators sat in the middle of two roads leading to the main gate of Andrews Barracks in the U.S. sector of the city

Enasa may buy UK lorry group

BY KENNETH GOODING, MOTOR INDUSTRY CORRESPONDENT, IN LONDON

ENASA, the Pegaso vehicles concern, wants to buy Seddon Atkinson, the UK truck builder, but is waiting for the consent of its parent, INI, the Spanish state-holding company.

INI is expected to give its decision before the end of the year.

Sr Juan Llorens, Enasa's deputy managing director, emphasised at the weekend that his company realised there was some urgency. "We think it is very important from Seddon's point of view that the uncertainties are cleared up quickly.

"Seddon is a good company with good products and loyal customers. But we think it would be in a much better position if the questions about its future were removed," he said.

Seddon was put up for sale last year by International Harvester (IH) of the U.S., which had run into severe financial difficulties and decided to withdraw from the truck business, outside the U.S.

IH acquired the British company for £10m in 1974 but said recently that, after three years of losses and a major rationalisation – which included reducing the workforce from 1,836 to 662 – Seddon's net worth had fallen below £4.5m ($6.7m).

Sr Llorens said that, if Enasa took control, "we would have to inject more money to bring Seddon back to complete health. We would help it recover quickly."

Seddon would retain its British identity and there would be no question, for example, of Enasa sending components from Spain for the present range of Seddon vehicles, he added.

Bank of China welcome for new Hong Kong bid to stabilise currency

Continued from Page 1

yesterday that they were prepared to defend that rate, but Sir John said that if the U.S. dollar became volatile he would consider linking the local currency to a basket of currencies.

Officials were forecasting an early rise in interest rates as demand increased for the Hong Kong dollar.

Sir John said the loss of revenue from the abolition of the tax on Hong Kong dollar deposits for the rest of the financial year would amount to HK$250m. New measures were being studied to claw back the money in different ways, and these might be announced in February's budget.

John Makinson writes: The decision by the Hong Kong authorities to peg their currency to the U.S. dollar will come as no shock to the foreign exchange markets. When the Government announced late last month that it was considering ways of producing an exchange rate more in line with the economic fundamentals, a form of pegging arrangement rapidly emerged as the most likely option.

The Hong Kong Government's firm commitment to free markets had left it poorly equipped to cope with a foreign exchange crisis. The colony has no central bank and only the most rudimentary control over its own money supply. It is also overwhelmingly dependent on foreign trade and foreign capital for its livelihood.

Another Government might have introduced foreign exchange controls and stringent monetary targets or have imposed reserve requirements on the local banking system. Even if Hong Kong had the machinery with which to manage those more traditional courses of action – and that must be open to serious doubt – their effect could have been to drive capital out of the colony.

The question now facing the foreign exchange markets is whether a pegging arrangement is tenable. There is admittedly a precedent for it in Hong Kong's history, between 1972 and 1974, but at that time speculative pressure on the currency was not so great and the volume of Hong Kong's foreign trade was very much smaller.

The virtue of the pegging system is its simplicity and the protection which it affords, in theory at least, to Hong Kong's own foreign exchange reserves. There is no doubt that the colony's existing exchange reserves, although unpublished, comfortably exceed the volume of notes in circulation, which stands currently at around HK$11.5bn. Since all future note issues will need to be backed by U.S. dollars, the Government should always have sufficient foreign exchange available to it.

Two principal obstacles, however, have to be overcome. In order for the system to work, bank deposits which are to be converted into foreign currency must first, in accounting terms at least, be changed into currency notes. That will have the effect of reducing the liquidity of the banks themselves and forcing them back with more U.S. dollars to obtain more currency. Since the willingness of the banks to lodge foreign exchange with the authorities will be limited, they will probably attempt to deter depositors from withdrawing capital by increasing interest rates, possibly very sharply. In an economy where property companies in particular are very vulnerable to higher rates, that could have disastrous consequences.

Second, the authorities will have no direct control over transactions in their currency outside the colony. If expectations grow that the Hong Kong dollar will be devalued, an unofficial exchange rate will develop outside the colony. In those circumstances, the authorities would be faced with the uncomfortable option of using their foreign exchange reserves to support the currency or tolerating the existence of a two-tier exchange rate.

Reagan to pass legal obstacle to bid for new term

By Reginald Dale in Washington

PRESIDENT RONALD REAGAN today becomes a legal candidate for re-election to the White House next year – even though he has not yet finally announced his intention of running again.

Mr Reagan is to sign papers setting up an official "Reagan-Bush '84" campaign committee, allowing it to start fund raising and organising political activities on his behalf. All that remains to make him an official candidate is a formal announcement that he is re-entering the fray, which his friends and advisers expect in either late November or early December.

Mr Reagan, however, is still allowing a minute element of doubt to persist, and the wording of the decision setting up the committee leaves him room to back out at the last minute.

A number of Washington political analysts still believe that in the end he will not run, whether on grounds of age, his wife Nancy's ill health, a desire to spend more time at his California mountain-top ranch or simply the feeling that he has achieved most of what he set out to do.

But the majority view is not only that he will run, but that he has already been doing so for several months. Mr James Baker, the White House Chief of Staff, yesterday said that everybody who worked with Mr Reagan on a day-to-day basis was sure he would run, while Mr Edward Rollins, the committee's campaign director, said he was 100 per cent convinced that he would do so.

The major political event of the weekend, however, was the flamboyant star-studded Washington première of a new film, The Right Stuff, a block-busting epic glorifying the first seven American astronauts.

The highly publicised film, which could easily turn into a smash hit, is expected to give a major boost to Senator John Glenn of Ohio in his race against former Vice-President Walter Mondale for the Democratic presidential nomination. Mr Glenn – the first American to orbit the earth – emerges from an unashamedly patriotic film as a dazzling national hero.

The film's première coincided with the first showing of a five-minute Glenn TV commercial.

Tebbit named in Thatcher reshuffle

Continued from Page 1

ing state assets which is the origin of much of the subsequent privatisation programme.

At Transport, he will be involved in the disposal of British Rail's Sealink operations as well as the injection of private capital into British Airways, the National Bus Company and the British Airports Authority.

Before switching to the Treasury in the September 1981 reshuffle, Mr Ridley had faced considerable Parliamentary criticism as a Foreign Office minister over his attempt to end the uncertainty over the future of the Falkland Islands through a sale-and-leaseback with Argentina.

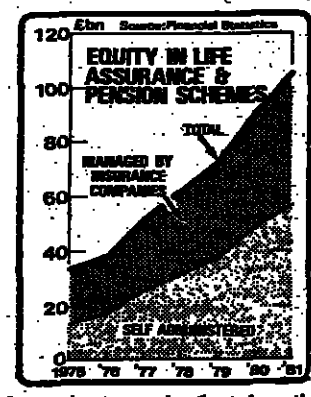
Mr Tebbit said last night that he would hold a press conference in a few days' time to talk about his new post, while Mr King commented that he would be honouring a scheduled appointment to meet the TUC on Wednesday to discuss their ideas about the political levy. Mr King added that he knew most of the people concerned having himself worked in the printing industry.

The immediate reactions were warm from industry and cool from the unions. Sir James Cleminson, deputy president of the Confederation of British Industry, the employers' organisation, said he had a "great admiration" for Mr Tebbit.

THE LEX COLUMN

The return of the private investor

In recent decades UK financial markets have become increasingly dominated by wholesale funds – essentially the big company pension schemes. But the emphasis is now shifting over to retail services. Indeed private individuals seem to be making a back-door comeback, after years of shrinking involvement. While they may be channelling their investments through pension and insurance funds – for reasons of tax efficiency – to attract them the funds are now beginning to allow a significant degree of choice in making and switching investments. The crude statistics show equity in life assurance and pension funds rising from £33.5bn in 1975 – about the same as direct personal involvement in the stock market – to £105bn in 1981, or about twice direct personal involvement. But the statistics disguise some quite sharp changes in the underlying structure of the funds.



There are four main reasons for looking to the revival of the private investor as a force to be reckoned with. The recent growth in pension funds has been heavily biased to money purchase schemes which are specific to individuals. The trend is likely to be reinforced by growing dissatisfaction with the arrangements for early leavers. Meanwhile the growing wealth of individuals – at least those in employment – will produce more disposable income available for investment. More important for the financial services sector may be the present unlocking of the wealth in the housing market, built up over the last 50 years.

Unambiguous statistics tracing the growing popularity of more individualised pensions do not exist. A flavour of the trend is provided by Life Offices Association figures which show that yearly premiums for personal pensions rose by 165 per cent between 1978 and 1982, whereas premiums going to non-personal funds – in practice a somewhat muddy category – rose by a more modest 100 per cent. Between 1981 and 1982 personal premiums rose by 23 per cent, and non-personal by a mere 4 per cent.

The relative slowdown for group pensions reflects in part the tough economic conditions of the last three years and the slimming down of big company workforces. The new corporate entrants into the pensions market are now the smaller companies, which are not prepared to take on the open-ended commitment of the classical 'two-thirds of final salary' scheme. So they have opted for money-purchase schemes, in which individuals receive a pension based on the sums they have invested over the years in which they will have far greater personal involvement than in the traditional company scheme.

Retail pension funds are also picking up sharply as a result of the growing popularity of "Top Hat" company director schemes and additional voluntary contributions made by pensionable employees. The competition to manage these funds is now moving on to a more aggressive plane – Save and Prosper's unified retirement package launched last week is likely to spawn a host of imitators. Hambro Life, for one, has a competitor waiting in the wings. A feature of the new competition is the opportunity given to purchasers of pensions to switch from units in one fund to another – and flexibility is already extending to the choice of individual stocks.

The dissatisfaction of early leavers with company schemes could well lead to some being broken up in favour of money purchase accounts. On a parochial note, the FT itself has set a precedent by opening talks with its journalists with a view to introducing just such a switch. Other groups of employees could well follow.

In the last few years annuities have become much more popular. These are devices by which individuals can roll up funds in a variety of more or less tax-efficient ways. At the beginning of the 1970s sums paid into life policies exceeded total pension contributions, but by the late 1970s life contributions had fallen to less than half of the payments towards pensions. By 1982, however, the proportion had risen to about two-thirds. The lower rates of inflation have made annuities much more attractive in that taxation of real capital is lower. But there are signs here that individuals on higher incomes are becoming aware that they might be able to accumulate worthwhile capital sums by retirement through regular saving. As, and if, real GNP grows, more and more individuals may aim at saving enough capital to reduce their need to insure against a long retirement by taking out a pension which dies with them.

The real returns offered in the markets over recent years enhance the attractions of accumulating financial assets as opposed, for example, to housing, the classic inflation hedge through the 1970s. In fact the main boost to personal liquid capital now emerging is not so much higher savings, but the extraction of equity from the housing market. The reason is essentially demographic. Today's pensioners were the first generation to become house owners on a significant scale. People over 65 now own 14 per cent of the country's total housing stock of £323bn in 1982 prices. Assuming their houses are worth the average figure, this implies equity of £45bn that they, or their heirs, may wish to realise. The press of people still entering the market at the bottom means that they will be able to make these investments liquid. Indeed, the latest Bank of England Bulletin emphasised the leakage from the housing market. A major part of the £7bn it estimates will be withdrawn this year must be due to this factor.

These developments are likely to push the UK down the U.S. road – at a respectable distance – towards the "financial supermarket". The prospective changes suggest that the merchant banks and other intermediaries specialising in managing wholesale funds may find themselves on the sidelines. Their pride of place is likely to go to groups like Hambro Life, Britannia Arrow, Save and Prosper and Mills and Allen, which have developed retail marketing arrangements. A sharp counter-attack is likely from the established insurance houses like the Prudential and Legal and General, which have up to now yielded ground to the newcomers. New entrants into the market may come from surprising places. With Sears Roebuck in mind, the Marks and Spencer board has toyed with the idea of offering financial services at various times over the last two years, although it is still a long way from coming to any decision.

The moral is that some of the City of London groups that have grown fat in the last 20 years on wholesale financial services will find themselves out of the action in the coming decades unless they take urgent steps to reposition themselves.

World Weather

		°C	°F			°C	°F			°C	°F			°C	°F
Ajaccio	F	24	75	Dubrovnik	S	21	70	Malaga	S	26	79	Salzburg	F	17	63
Algarve	F	24	75	Faro	S	22	72	Malta	S	26	79	Seoul	S	22	72
Algiers	S	30	86	Florence	C	25	77	Manila	S	31	88	Singapore	R	32	90
Amsterdam	S	11	52	Frankfurt	R	9	48	Miami	C	30	86	Stockholm	C	12	54
Athens	S	23	73	Funchal	S	24	75	Milan	Fg	14	57	Strasbourg	R	11	52
Bahrain	S	30	86	Geneva	R	12	54	Moscow	C	14	57	Sydney	–	—	—
Bangkok	C	30	86	Gibraltar	–	—	—	Munich	C	13	55	Taipei	S	31	88
Barcelona	F	23	73	Guernsey	F	12	54	Nairobi	–	—	—	Tangier	F	22	72
Beirut	S	24	75	Helsinki	R	11	52	Naples	R	22	72	Tehran	–	—	—
Belgrade	S	23	73	H. Kong	S	30	86	New Delhi	S	30	86	Tel Aviv	S	25	77
Berlin	R	15	59	Innsbruck	F	16	61	New York	F	19	66	Tenerife	F	34	93
Biarritz	R	14	57	Inverness	R	10	50	Nice	C	16	61	Tokyo	F	20	68
Blackpool	C	11	52	Istanbul	S	20	68	Oporto	C	17	63	Toronto	F	14	57
Bordeaux	R	14	57	Jersey	R	12	54	Oslo	C	10	50	Tunis	F	26	79
Brussels	F	12	54	Jo'burg	S	24	75	Paris	F	14	57	Valencia	F	26	79
Budapest	S	27	81	Las Palmas	F	33	91	Prague	S	17	63	Venice	C	18	64
B. Aires	–	—	—	Lima	–	—	—	Reykjavik	S	1	34	Vienna	S	17	63
Cairo	S	26	79	Lisbon	F	28	88	Rio de J'o	S	30	86	Warsaw	S	19	66
Cape Town	–	—	—	Locarno	C	13	55	Rome	C	23	73	Zurich	C	15	59
Caracas	–	—	—	London	F	13	55								
Casablanca	S	23	73	Los Angeles	C	24	76								
Copenhagen	F	13	55	Luxembourg	R	7	45								
Corfu	S	24	73	Madrid	F	18	64								
Dublin	F	11	52	Majorca	F	24	75								

Readings at mid-day yesterday

C–Cloudy D–Drizzle F–Fair Fg–Fog H–Hail R–Rain S–Sun Sl–Sleet Sn–Snow T–Thunder

Genscher missile talks

Continued from Page 1

Germany because of their timing – at the start of a week when Bonn expects mass demonstrations and protests against deployment. Yesterday's gloomy assessment is likely to be accepted by German public opinion as marking the formal collapse of attempts to reach agreement on medium-range missiles.

Herr Genscher, who consistently warned against too high expectations from his risky venture, repeated yesterday that neither East-West relations nor German-Soviet relations could be allowed to be "confined" to the medium-range missiles issue.

He pointed out that the West wanted to continue the Geneva talks, referred to continuing East-West negotiations over strategic weapons and troop reductions and pointed forward to the conference on confidence-building measures which is due to open in Stockholm next January.

Reuter adds from Moscow: Mr Gromyko said after the talks that agreement at the Geneva talks was still possible, the official Tass news agency reported last night.

But according to the Tass account of his meeting with the West German Foreign Minister, Mr Gromyko said an accord would have to be reached before the deployment of new U.S. missiles started later this year.

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SECTION II – COMPANIES AND MARKETS
FINANCIAL TIMES
Monday October 17 1983

Argentina is given date for drawing on rescue package

BY OUR EUROMARKETS CORRESPONDENT

AFTER MORE than two weeks of anxious nail-biting, Argentina's leading creditor banks have finally set a new date of October 28 for the country to draw the first $500m instalment of the $1.5bn loan it is to receive as part of its debt rescue package.

A recommendation to this effect was telexed over the weekend to all 300 creditor banks by their Advisory Committee in New York. The drawing, previously scheduled for today, was thrown into doubt by the arrest two weeks ago of Sr Julio Gonzalez del Solar, the country's central bank president, and a freeze on debt rescheduling imposed by a provincial judge in the Patagonian city of Rio Gallegos. The freeze has now been lifted by an appeals court in Buenos Aires.

Mr William Rhodes, chairman of the Advisory Committee, confirmed over the weekend that Argentina had agreed to bring all arrears of public sector debt interest, outstanding as a September 30, up to date as a pre-condition for drawing on the loan.

A statement over the weekend also said that the International Monetary Fund has assured creditor banks that its standby credit for Argentina, in jeopardy because of the arrears, remains in effect. The Government in Buenos Aires has meanwhile confirmed that it will proceed with the rescheduling of some $6bn in public sector debt falling due this year, Mr Rhodes said.

The statement follows a marked change in the mood prevailing a week ago when the debt rescue effort was still bogged down in nationalistic fervour ahead of Argentina's elections on October 30.

Since then creditor banks have forcibly reminded Argentine officials that the country will need the $1.5bn credit, whoever wins on October 30. This argument has obviously had considerable impact which suggests that commercial banks are not as entirely at the mercy of political developments in Latin America as some observers had previously thought.

Indeed Brazil, which is in the process of swallowing unpopular austerity measures, provides another example of a country being prepared to pay a heavy political price for commercial bank credit.

At the moment, however, the main preoccupation of the leading banks is with arranging the credit itself, tomorrow Sr Affonso Celso Pastore will address banks in London on the last leg of a world tour designed to drum up support for the country's proposed $6.5bn credit.

Mr Guy Huntrods, an executive director of Lloyds Bank International, who has been accompanying Sr Pastore, said over the weekend that response to the tour so far had been generally positive. During the latest stop-over in Bahrain, he said there had been "a constructive discussion" with about 30 creditor banks.

Middle Eastern banks were among the least responsive to Brazil's previous rescue effort, but were now showing "a mood of realistic appreciation of Brazil's needs," according to Mr Huntrods.

Brazil, as already reported, has asked for the initial disbursement of the credit to total "up to $3bn." It is understood that this drawing should become available before the end of the year, allowing the country to eliminate debt service arrears now being held just below the critical leval of 90 days.

If the drawing can be made this quickly, Brazil will be able to avoid the need for further bridging finance to meet immediate cash flow needs.

Meanwhile Portugal has scored a notable success with its current loan. The 18 lead managers on Friday offered to increase the amount to $350m from the $300m previously sought.

INTERNATIONAL BONDS

Europe calm despite U.S. upset

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT, IN LONDON

IT IS somewhat unusual to find bond dealers congratulating themselves on the tone of a market that has fallen nearly a point in a single week, but that was the case in the Eurodollar bond market last Friday.

The Eurobond market has always tended to move more narrowly than its volatile counterpart in New York, and last week this was particularly apparent as it doggedly refused to follow fully through the shakeout in Wall Street that at one stage saw the key U.S. Treasury "long bond" three points below its close a week before.

Even in Europe, where currency considerations play an important role in investment decisions, such a drop might have been expected to have serious repercussions, particularly on new bond issues that suddenly look way out of line with secondary market yields. Discounts can widen to three points and more.

That this did not happen in the Eurobond market last week cannot be explained by a shortage of new paper. Altogether $850m of new fixed rate dollar bonds were launched, including a $500m jumbo issue for Canada on Monday. This issue attracted particular attention because of its low 10⅞ per cent coupon.

But it still managed to close the week at a discount of only around 1¾ points from its par issue price. Some dealers suspected that the reason for this might be technical.

The bonds were supported in the market early in the week by lead manager Deutsche Bank. As the price held up, houses which had gone short may have been forced to cover.

Others point out that Canada is still regarded as a first class credit risk and the five year maturity of this issue has a particular appeal to central bank investors, who have been starved of good quality paper with such a maturity.

Indeed part of the reason why the Eurobond market fared as well as it did last week was ascribed to the quality of the issues on offer.

The least attractive name, Montreal Urban Community, was also the issue with the highest coupon at 12 per cent. On Friday it was trading at a discount of some 1¾ points from its par issue price, but the fate of the other issues suggests that there is still some underlying demand for good quality names.

Moreover the market seems ready to pounce on any "good news," such as the low 0.2 per cent increase in U.S. wholesale prices in September and a slight drop in the Federal Funds rate on Friday.

This helped Eurobond prices to recover slightly at the end of the week, although the market was also discounting a fairly large increase in U.S. M-1 money supply.

The actual turn-out, a drop of $1.1bn, was thus unexpected. "The market will take a lot of heart and pick up," said one senior dealer. "And that is going to help sell some of these new issues."

The advantage for borrowers in this market is that the interest (payable in Swiss francs) can be hedged cheaply in the exchange market producing a total borrowing cost well below that of offering a deep discount dollar bond. Such an advantage will, however, only last as long as the cheap hedging possibility exists, which led some bankers to suggest that the current fashion for dual currency issues may be rather short lived.

Elsewhere last week saw two further Australian dollar issues – for the Primary Industry Bank and News Corp. The Australian currency has appreciated substantially against the U.S. dollar since its post election devaluation, but with coupons in the 13½ per cent to 14 per cent range the bonds also offer an income that appeals strongly to retail investors on the continent.

Renewed activity in Samurai bonds

BY YOKO SHIBATA IN TOKYO

THE SAMURAI bond market, which allows foreign borrowers a way to float bond issues in Japan, showed a flicker of renewed activity last week as the yen regained a little more ground against the dollar on the foreign exchange markets.

Four issues were announced for the December calendar for a total of Y75bn on behalf of Malaysia (Y15bn for 10 years through Nikko), Sweden (Y20bn for 10 years through Nomura), the World Bank (Y20bn for 12 years through Yamaichi) and the Asian Development Bank (Y20bn for 12 years through Nomura).

In recent months, the Samurai market has lost much of its appeal because of the steep fall of the yen. Borrowers have been frightened off because they feared the foreign exchange risk of incurring yen debt at a time when the Japanese currency has been seriously undervalued.

As a result, the queue of new issuers – which numbered about 30 a year ago – had dwindled by last week to a mere handful.

In September, the City of Oslo and the Philippines decided to postpone their planned Samurai issues until next year. Three issues are expected this month, including the Y20bn bond launched last week by the World Bank.

Next month's calendar, confirmed by Tokyo underwriters last Friday, will also consist of three issues (for Spain, the European Economic Community and the Inter-American Development Bank) totalling Y50bn.

The December calendar, which had until last Friday remained blank, represents some quickening of the pace, yet it appears likely to leave total borrowings through the Samurai market little higher than last year's Y683bn.

In the first nine months, new issues amounted to Y520bn compared to Y550bn in 1982.

CURRENT INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Lead Manager	Offer yield %
U.S. DOLLARS							
Canada ‡	500	1988	5	10⅞	100	Deutsche Bank, CSFB, Orion Royal Bank	10.875
Eksportfinans ‡	100	1990	7	11½	100	Citicorp Intl., Christiania Bank, CSFB	11.500
Banca Svizzera Italiana §‡	20	1993	10	6	100	SBCI	6.000
Montreal Urban Cmty. ‡	75	1990	7	12	100	CSFB	12.000
Nordic Invest. Bank ‡	75	1990	7	11¾	99¾	CSFB	11.884
Nomura Secs. ¶‡	100	1988	5	6¼	100	Nomura Intl.	6.250
CAN. DOLLARS							
Asco Canada (a) ‡	50	1989	6	13	100	Kidder Peabody, Salomon Bros., Wood Gundy	13.000
D-MARKS							
EIB **‡	100	1988	5	8	99½	West LB	8.220
Asian Devt. Bank ‡	200	1993	10	8½	100	Deutsche Bank	8500
SWISS FRANCS							
GMAC $(a)‡	120	1991	–	7	–	Bqun. Morgan Grenfell en Suisse	7.000
Chiyoda Chemical **§‡	100	1988	–	3	100	CS	3.000
Teijin **§‡	50	1989	–	3⅛	100	SBC	3.125
D'Urban Inc. **§‡	35	1988	–	3⅛	100	UBS	3.125
Dainippon Screen Mfg. **§‡	50	1988	–	3	100	SBC	3080
Chisso Co. **‡	20	1988	–	6¼	100	CS	6.250
K-Line **‡	70	1991	–	6	99½	CS	6.081
SWISS FRANCS							
EIB ‡	100	1993	–	5¾	99¼	UBS	5.851
Nat. Australia Bk. **‡	60	1988	–	5¾	100	Citicorp Bk. (Switz)	5.750
Daishinpan Co. **§	30	1989	–	3⅛	100	SBC	*
World Bank	100	1995	–	*	*	SBC	*
Baxter Travenol $	100	1993	–	7	–	SBC	*
Sears Roebuck $	100	1993	–	7	–	UBS	*
Amex Ovs. Fin $	100	1991	–	7¼	–	Soditic	*
AUSTRALIAN DOLLARS							
News Corpn. Secs. ‡	25	1988	5	14	100	Hambros Bank	14.000
Primary Industry Bk. of Australia ‡	40	1988	5	13⅝	100	Orion Royal Bank	13.625
GUILDERS							
World Bank ‡	300	1993	8	8½	100	ABN	8.500
Electricité de Fr. ‡	150	1993	8	8¾	99½	ABN, Amro Bank	8.840
ECUs							
EIB	50	1993	8.44	11⅛	*	Soc. Gen. de Bque.	*
YEN							
World Bank ‡	20bn	1995	10.32	7.8	99.35	Daiwa Secs	8.040

* Not yet priced. ‡ Final terms. † Floating rate note: coupon is Spread over 6-month Libor. § Convertible. ** Placement. ¶ With warrants. a spread over 3-month Libor. $ Dual currency issue repayable in dollars. Note: Yields are calculated on AIBD basis.

INTERNATIONAL CAPITAL MARKETS AND COMPANIES

U.S. BONDS

Uncertainty remains despite sharp fall in money supply

U.S. BOND prices fell sharply for most of last week as the earlier excessive optimism underpinning the rally in the U.S. credit markets evaporated. Following a surprisingly good set of money supply figures late on Friday the market recouped some of its losses but it is still unclear whether the rally will last.

Several factors contributed to the deterioration in the market's psychology last week. It had started the previous Friday with the release of a poor set of money supply figures and the publication of the minutes of the last Federal Open Market Committee meeting which made no specific reference to any easing in monetary policy at the August 23 meeting. Meanwhile remarks by Mr Paul Volcker, chairman of the Federal Reserve, who was attending the American Bankers Association convention in Honolulu, also contributed to the market's negative mood.

U.S. INTEREST RATES (%)

	Week to Oct 14	Week to Oct 7
Fed funds wkly aver	9.46	10.00
Three-month CDs	9.25	9.10
Three-month T-bills	8 79	8.66
30-year Treas bond	11.71	11.36
AAA Utility	12.50	12.12
AA Industrial	12.38	12.13

Source: Salomon Bros (estimates). In the week ended October 5 M1 fell by $1.1bn to $517.2bn. In August M2 rose by $8.8bn to $2,146bn and M3 rose by $15.5bn to $2,544bn.

Mr Volcker is reported as saying that continued high budget deficits are "the greatest single threat to balanced and sustainable recovery." While the credit markets took this to mean the Fed would continue to keep a tight grip on U.S. monetary policy, some analysts believed that the credit markets had misunderstood Mr Volcker's remarks.

Smith Barney's Frank Mastrapasque argues that the most interesting aspect of Mr Volcker's speech was the extensive discussion and concern expressed about the international debt crisis rather than his reiteration of prior concerns about budget deficits.

For the time being, however, the U.S. credit markets are dominated by domestic concerns, and the absence of any evidence of a change in monetary policy, when many had expected to see some, took its toll of bond prices last week.

From a peak of 105⅝, the Treasury long bond had fallen by a full three points by last Thursday and the yield on three-month Treasury bills had risen by 25 basis points taking interest rates back to their mid-September levels.

This performance was in marked contrast to the almost uninterrupted strength of the U.S. bond markets in the previous three weeks. The buoyancy of the Fed funds rate which was quoted above 9.5 per cent for the first three days of last week (Monday was a holiday in the Government securities markets) also contributed to the credit markets unease.

The final straw for the markets was the release of the September retail sales figures on Thursday which showed a 1.6 per cent rise adding to the evidence that the economic recovery is proving to be more robust than expected.

The September industrial production figures, output rose 1.5 per cent, was also on the high side of market expectations and the only real consolation in last week's economic data was the 0.2 per cent rise in producer prices, which indicates that inflation may be more under control than some people had thought.

By the end of the week it was beginning to look as if the market's negative mood was overdone and the release of the weekly money supply figures, showing a $1.1bn fall in M1, was just the sort of news to spark a typical end-week rally in the bond markets. The price of the long bond soared by 1½ points to 104⅛ and the Fed funds rate fell sharply dipping below 9 per cent.

The release of the monthly M2 and M3 figures also boosted the markets mood. M2 rose by $8.8bn which was lower than expected and M3 rose by $15.5bn.

William Hall

UIC shareholders urged to reject Tang Eng offer

BY CHRISTOPHER SHERWELL IN SINGAPORE

THE INDEPENDENT directors of United Industrial Corporation, which has substantial property and chemical manufacturing interests in Singapore, have recommended shareholders not to accept an offer for the company from Tang Eng, an investment company controlled by Mr Oei Hong Leong, UIC's managing director.

The decision is in line with advice from merchant bankers Morgan Grenfell (Asia), who said the offer did not represent a fair valuation of UIC shares. Tang Eng offered S$1.20 cash per share, valuing UIC at S$127.5m (US$60m) on an enlarged capital of 106.3m shares following a recent rights issue.

This is not the first occasion that Tang Eng has tried to take over UIC. In 1980 it was one of three companies battling for control, and it offered S$5.50 per share—more than either of its two rivals. None of the three succeeded.

UIC's principal asset lies in the UIC building in Singapore's financial district. A survey last month valued its interests in the building at S$183m. The group also has stakes in U.S. property worth S$166m.

UIC also owns factory land in Singapore, which is used for its manufacturing operations. These include UIC Chemicals and United Detergents, which manufacture and sell detergents. The group also has a 64.5 per cent stake in an Indonesian-incorporated company which will make and sell alkylbenzene.

Reports in the local business press in Singapore have suggested that other companies are also interested in UIC. But none has stepped forward publicly.

According to documents relating to Tang Eng's offer, Tang Eng's principal activity is the holding of investments. It is wholly owned by a company called Chip Lian, which is ultimately owned by Mr Oei and members of his family.

New chief executive for Sun Hung Kai Bank

BY OUR FINANCIAL STAFF

MERRILL LYNCH of the U.S. and Paribas of France have tightened their operational control over Hong Kong's troubled Sun Hung Kai securities and banking group by appointing M Michel Barret, a Paribas executive vice-president, as chief executive officer, of Sun Hung Kai Bank.

Mr Eddie Lau, former managing director and vice chairman of the bank, has resigned, but remains a director.

Sun Hung Kai Bank and Sun Hung Kai Securities were recently reorganised under a new holding company, Sun Hung Kai and Company. Merrill Lynch and Paribas increased their shareholdings in the holding company to 25.5 per cent each. Mr Fung King Hey, the group's founder and chairman, reduced his shareholding to 28.8 per cent.

Hewlett in tie-up with Fiat unit

By James Buxton in Rome

TELETTRA, FIAT'S telecommunications subsidairy, has reached an agreement with Hewlett-Packard, the U.S. electronics equipment company, which should enable both to strengthen their position in the Italian office communications market.

Hewlett-Packard, one of the world's leading companies in data processing and office automation, is to co-operate with Telettra in developing and marketing products in Italy in the fields of private telecommunications networks, office automation and data processing.

Telettra, which already has a small private telecommunications division, will benefit from access to Hewlett-Packard technology and products, and will be in a position to provide integrated office systems, combining data processing, office and telecommunications equipment.

The agreement, with the Italian subsidiary of Hewlett-Packard, should enable Telettra to compete more strongly with Olivetti, the leading Italian company in office automation, and foreign companies.

Allegations on Penn denied by Chase

BY OUR FINANCIAL STAFF

CHASE MANHATTAN, the third largest bank in the U.S., has reacted strongly to charges from a government agency that it used "unlawful economic coercion" and other illegal tactics to obtain $19m from Penn Square Bank before the Oklahoma City bank collapsed last year.

The Federal Deposit Insurance Corporation, the government agency which insures bank deposits, said it was seeking $19m in compensatory damages and $10m in punitive damages from Chase Manhattan. The FDIC alleged that Chase threatened Penn Square officials to collect loans.

The FDIC, the receiver in Penn Square's bankruptcy case, filed its claim in an Oklahoma City Federal Bankruptcy Court in response to a claim by Chase, which had sued the agency to recover money loaned through Penn Square.

Chase said in New York that it believed the FDIC charges were "totally without merit." Chase would "vigorously pursue its own claims to recover damages from the Penn Square estate."

When first asked about the counterclaim, the agency had said it was seeking $77m in total damages. The figure was later amended.

Japanese link for Lilly

BY OUR FINANCIAL STAFF

ELI LILLY, the major U.S. ethical drugs manufacturer, has entered a long-term agreement with Yamanouchi Pharmaceutical of Japan for the development and marketing of Yamanouchi products in the U.S. and Canada.

Initially, the pact is a product licensing agreement, but it also allows for the future formation of a joint venture in the U.S. Ultimately the agreement would allow Yamanouchi to obtain its own marketing presence in the U.S.

The deal gives Lilly the right of first refusal to future compounds from Yamanouchi research.

INTERNATIONAL APPOINTMENTS

Reorganisation of Columbia motion pictures

● COLUMBIA PICTURES INDUSTRIES, INC. is reorganising its motion picture division. **Mr Guy McElwaine** will succeed **Mr Frank Price** as chief executive officer of that division. He will have the title of president and chief executive officer of the division and will report to **Mr Richard C. Gallop**, president and chief operating officer of Columbia Pictures Industries, Inc, who will become chairman of the division. Mr Gallop and Mr McElwaine have created a studio operating committee comprised of themselves and **Mr Patrick M. Williamson**, president of Columbia Pictures International, and **Mr Jonathan L. Dolgen**, senior executive vice-president of Columbia Pictures. Mr Frank Price has resigned as chairman of the motion picture division. He will be available for consulting with Mr McElwaine and the studio until December 31 to facilitate the transition of studio management.

● CONSULTANTS (COMPUTER & FINANCIAL), the City-based financial software company, has appointed **Mr Samuel Sydney Pochin** as managing director of its new overseas subsidiary, CCF (Hong Kong). Mr Pochin joins CCF from Peat Marwick Mitchell, Hong Kong, where he was senior data processing consultant with its management consultancy company.

● NABISCO BRANDS INC has appointed **Mr Edward J. Robinson** as senior vice-president-controller and **Mr Harrison M. Bains Jr** as senior vice-president-treasurer. Mr Bains was previously senior vice-president-finance and Mr Robinson vice-president and treasurer.

● **Mr Kurt Kampe** has been appointed vice-president of the STROMBERG industrial group of Finland from November 1, when the merged company Kymmene-Stromberg Corp starts operations. He is responsible for the marketing of the Stromberg industrial group. He will succeed **Mr Matti Ilmari**, who has been appointed a member of the operating board of the Kymmene-Stromberg Corp and executive vice-president to head the Stromberg industrial group.

Mr Kurt Kampe, vice-president of Stromberg

● BARCO INDUSTRIES of Kortrijk, has appointed **Mr Hugo R. Vandamme** as general manager and managing director of the company and its operating companies. This appointment will fill the gap brought about by the death of **Mr Michael J. Plaisier**, the former general manager and managing director.

● HERTZ CORPORATION has made the following appointments: **Mr Fredy M. Dellis** and **Mr Craig R. Koch** have become executive vice-presidents. Mr Dellis who joined Hertz in 1969, will continue to serve as president of Hertz Europe, a post he has held since April 1982. Mr Koch who joined Hertz in 1971, will continue as general manager of the U.S. Rent-A-Car division. He was a vice-president. Mr Dellis and Mr Koch have been elected to the board of directors of Hertz. Promoted to senior vice-president from vice-president at Hertz are: **Mr Donald L. Gilles** who will continue to be responsible for industrial relations. **Mr Irving Kagan** will continue to serve as general counsel. **Mr William Sider** continues as Hertz's chief financial officer. **Mr Brian J. Kennedy**, advertising and sales for Trans World Airlines Inc, joins Hertz as senior vice-president, marketing, with responsibility for worldwide marketing and public affairs activities.

● **Mr Garrett R. Codrington** has joined the Engineering and Construction Group of COMBUSTION ENGINEERING, INC., New Jersey, as vice-president, business development. His responsibilities will include marketing the respective capabilities of the group's business units for projects related to process plants and oil and gas production facilities.

● CHRYSLER CORP. has appointed **Mr Bryan P. Pracher** as manager, production engineering, in the company's stamping assembly and diversified operations group. He was plant manager, Huntsville electronics plant since last October.

● THE FEDERAL NATIONAL MORTGAGE ASSOC. has named **Mr Stuart A. McFarland** as executive vice-president and chief financial officer from October 31. Mr McFarland, currently executive vice-president and chief planning officer, succeeds **Mr Arthur P. Solomon**, who is resigning to become president and chief operating officer of the Krupp Company, a real estate and financial services company headquartered in Boston, Massachusetts.

● **Dr Norbert Rech**, a German computer graphics expert, has joined SPECTROGRAPHICS CORP and will be responsible for product sales in Germany, Austria and Switzerland. He was managing director of European operations for Applicon and held various managerial positions for Control Data Corp in Europe and South Africa.

● GOTAAS-LARSEN SHIPPING CORP has appointed **Mr Petter Rasch** as senior vice-president with responsibility for chartering and other commercial activities. These activities had previously been divided among several individuals.

FT INTERNATIONAL BOND SERVICE

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Amex O/S Fin. 10¾ 90	100	94½	95	+0¼	−0½	11.41
Bk. of Amer. 8 88 XW	150	†86½	87¼	−0¼	−0¼	11.96
Bk. of Tokyo Hd. 11 90	100	95¾	96¼	+0¼	0	11.89
Brit. Col. Hyd. 10¾ 88	200	96⅞	97⅜	−0¼	−0¼	11.07
[illegible]						

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Australia 8⅝ 92	15	104⅝	105⅝	+0⅛	+0¼	7.83
EIB 8¼ 92	15	102⅝	103⅜	+0⅛	+0⅝	7.75
Japan Airlines 7⅞ 87	9	†101¾	102⅜	0	+0¼	7.08
New Zealand 7¾ 89	15	102	102½	−0⅛	−0⅛	7.14
World Bank 8¼ 92	20	103½	104⅜	0	+0¼	7.72

Average price changes... On day 0 on week +0⅛

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Farm Credit 12¼ 90 C$	75	†98⅞	99⅜	+0⅛	+0½	12.47
Norcen 12¾ 93 C$	60	†96⅞	97⅜	0	−0⅛	13.29
TD Mt. Cpn. 12½ 88 C$	40	†100⅛	100⅝	+0⅛	0	12.34
Quebec Hyd. 12¾ 93 C$	50	†99⅝	100⅛	+0⅛	+0⅝	12.74
Royal Trstco. 12¾ 88 C$	50	†99½	100	+0⅛	+0⅛	12.88
World Bank 12¼ 90 C$	75	†99⅛	99⅝	+0⅛	+0⅛	12.36
Xerox Canada 12 88 C$	40	†101⅞	102⅜	0	−0⅛	11.39
EEC 11⅛ 93 ECU	70	100	101	0	0	11.16
Genfinance 11 90 ECU	60	99⅜	99⅞	+0⅛	+0⅝	11.16
Algemene Bk. 8¾ 88 Fl	150	100½	101	+0⅛	0	8.54
Bk. Mees Hope 9 88 Fl	75	101	101½	0	0	8.67
[illegible]						

DEUTSCHE MARK STRAIGHTS; SWISS FRANC STRAIGHTS; FLOATING RATE NOTES; CONVERTIBLE BONDS: [illegible]

EUROBOND TURNOVER

(nominal value in $m)

	Cedel	Euro-clear
U.S. $ bonds		
Last week	5,099.1	12,088.8
Previous week	6,799.4	13,445.7
Other bonds		
Last week	1,079.6	925.3
Previous week	1,337.2	851.4

* No information available—previous day's price.

† Only one market maker supplied a price.

STRAIGHT BONDS: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡ three-month; § above mean rate) for U.S. dollars. C.cpn = The current coupon. C.yld = The current yield.

CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Chg.day=Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

The list shows the 200 latest international bonds for which an adequate secondary market exists. The prices over the past week were supplied by: Kredietbank NV; Credit Commercial de France; Credit Lyonnais; Commerzbank AG; Deutsche Bank AG; Westdeutsche Landesbank Girozentrale; Banque Generale du Luxembourg SA; Banque Internationale Luxembourg; Kredietbank Luxembourg; Algemene Bank Nederland NV; Pierson, Heldring and Pierson; Credit Suisse/Swiss Credit Bank; Union Bank of Switzerland; Akroyd and Smithers; Bank of Tokyo International; Blyth, Eastman, Paine, Webber International; Chase Manhattan; Citicorp International Bank; Credit Commercial de France (Securities) London; Daiwa Europe NV; EBC; First Chicago; Goldman Sachs International Corporation; Hambros Bank; IBJ International; Kidder Peabody International; Merrill Lynch; Morgan Stanley International; Nomura International; Orion Royal Bank; Robert Fleming and Co.; Samuel Montagu and Co.; Scandinavian Bank; Societe Generale Strauss Turnbull; Sumitomo Finance International; S. G. Warburg and Co.; Wood Gundy.

Closing prices on October 14.

UK COMPANY NEWS

TKM sells its forest division

Tozer, Kemsley and Millbourn (Holdings), the international trading group, is selling its important forest products division, Price and Pierce, to a subsidiary of Sears Roebuck, the U.S.-based retail and financial services group. The deal is worth a maximum of £4.1m.

In the deal, announced at the weekend, Price and Pierce is being bought by Sears World Trade Inc., a wholly-owned subsidiary of Sears Roebuck. The consideration to Tozer will initially be about £3.3m with further payments up to a maximum of £750,000.

These further payments will be made once Tozer has fulfilled the conditions of certain warranties "and other matters."

As part of the deal Tozer will be entitled to receive the profits after tax of Price and Pierce for the nine months to September 30, 1983. The insurance activities of Price and Pearce and a debt repayable from Mexico to Price and Pearce amounting to £1.17m will not be acquired by Sears World Trade but will be retained by Tozer. It is anticipated that this debt should be repaid not later than mid-March 1984.

The net assets of Price and Pearce as at December 31, 1982, excluding the insurance activities, but including the Mexican debt, amounted to £5.9m. Pre-tax profits for the year ending December 1982 amounted to £62,000.

Sears World Trade imports, exports and offers trade support services. It offers management, technical and other financial services to U.S. and foreign companies. It is intending to use Price and Pearce to assist in the area of forest products and "to exploit opportunities on the international scene." Sears Roebuck controls no other organisation with similar activities to Price and Pearce.

Tozer Kemsley acquired Price and Pearce in 1971 in a £7.3m agreed bid after J. H. Vavasseur, the financial services group, had initiated talks with Price and Pearce which might have led to an offer.

For the six months ending June this year Tozer Kemsley reported a return to profitability after a long period of losses. Pre-tax profits were £3.9m compared with a loss of £1.35m a year earlier.

The group made a string of disposals during its profit collapse including the sale of its travel companies, and its international trade finance division to respectively the Rank Organisation and the Hongkong and Shanghai Banking Corporation.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether the dividends are interims or finals and the sub-divisions shown below are based mainly on last year's timetable.

TODAY

Interims: Erith, Seafield Gentex, Francis Sumner, Western Brothers.

Finals: BPM, Bryant, Cradley Print.

FUTURE DATES

Interims:

Bluemel Bros	Oct 21
Clarke (Clement)	Nov 1
Richardsons Westgarth	Oct 28
Uniflex	Oct 21

Finals:

Goodman Bros	Oct 21
Intervision Video	Nov 3
McKechnie Bros	Oct 27
Medminster	Oct 19
New Australia Investment Trust	Oct 25

K. O. Boardman qualified

THE accounts of K.O. Boardman International for the year to March 31, 1983 have been qualified by the auditors, Binder Hamlyn. They say negotiations are currently taking place with the group's bankers for overdraft facilities to replace existing financing arrangements, and continuation of the group's activities is dependent upon a successful outcome to these negotiations.

The report adds that the accounts have been drawn up on a going concern basis which assumes that adequate facilities will be obtained.

Mr B. Tomlinson says in his chairman's statement: "The group operates with no less than seven different bankers, a legacy of the past when there were a greater number of operating subsidiaries. This has resulted in negotiations with the various bankers becoming cumbersome and protracted, particularly in view of the fact that all borrowings were unsecured."

As known, the group incurred pre-tax losses of £189,514 in the year to March 31, 1983. In the previous year it had profits of £3,596. At the year-end, shareholders' funds stood at £4.04m, compared with £4.27m. Net current assets were £2.9m (£2.52m).

Meeting: St. James's Club, Manchester, October 31, at noon.

Rosehaugh advances and lifts dividend

For the year ended June 30 1983 Rosehaugh is lifting its dividend from 2.45p to 2.87p net per share, on attributable profits ahead from £1.77m to £2.12m, or 29p (24.8p) per share. The group is an investment holding undertaking, with interests in property investment and trading, and security dealing.

Turnover came to £14.6m (£16.31m) and profit thereon to £3.57m (£4m). There is £235,000 (£94,000) income from listed investments and £589,000 (£67,000) profit on the disposal of investments.

Interest payable was down to £1.21m (£1.43m) to give a profit before tax of £2.18m (£1.87m). Tax requires £46,000 (£96,000) and minorities £11,000 (£7,000).

Godwin Warren

In its first set of figures since joining the Unlisted Securities Market in May, taxable profits of Godwin Warren Control Systems increased from £48,000 to £56,000 in the first half of 1983. Turnover slipped by £47,000 to £1.4m.

With earnings per 25p share given as 0.98p (1.59p) the interim dividend is set at 0.7p net

Mr David Simpson, chairman of this international supplier of standard and computerised parking systems and railway and safety products, says prospects indicate 1983 will be substantially ahead of 1982—when taxable profits of £201,000 were earned—and indications for the first half of 1984 are "most encouraging."

At the time of the placing a total dividend of 1.4p was forecast for the year.

Jardine Reinsurance

Lombard Elizabeth Insurance, wholly-owned subsidiary of Lombard Insurance Company of Hong Kong, has appointed Jardine Reinsurance Management to underwrite a non-marine, an aviation and a marine reinsurance account in the London market on its behalf.

Share information

The following securities have been added to the share Information Service:

Elders IXL Ltd. (Section: Industrials)

Pearce (C. H.) & Sons (Buildings)

Rayford Supreme Holdings (Stores)

Stirling Group (Textiles)

Arrow Chemicals

Arrow Chemicals rights issue will be on the basis of one-for-four at 58p per share.

BIDS AND DEALS ROUND-UP

Howden £1.2m acquisition

Airscrew Howden, a subsidiary of the Howden Group, is buying, for £1.17m, all the stocks, work in progress and associated equipment of the commercial and military air control business at Shildon, Co. Durham, of Westair, a subsidiary of Neil and Spencer Holdings.

Of the consideration £965,000 is payable in cash on completion and the balance over the period to November 30, 1985, based on stock usage.

Upon completion, Westair will terminate all operations at Shildon and will use the cash proceeds in repaying bank loans and creditors relating to the Westair business.

Net losses attributable to the businesses concerned amounted to £370,000 in the year ended November 30, 1982.

* * *

Warrington & Sons has acquired J. Wilson (Heywood), a building contractor based in Middleton, Manchester, for £292,500 cash.

Net assets of Wilson on May 31 were £306,000. Since then £60,000 has been paid to the proprietors, Mr and Mrs Wilson by way of pension, bonus and severance pay.

Profit before tax for the year to the end of May was £99,000.

* * *

At the close of business on October 12, the day on which Brengreen revised its offer for Sunlight, Brengreen had received acceptances in respect of 512,871 Sunlight ordinary (4.2 per cent).

Together with the 25,000 shares acquired before the announcement of the offer and the 850,000 since the announcement, Brengreen had acquired or received acceptances for a total of 1,387,871 Sunlight ordinary (11.4 per cent) at that date.

* * *

Macfarlane Group (Clansman) the Scottish packaging, printing and plastics group, has acquired the whole issued share capital of R. Mitchell (Grantham) for £300,000.

The consideration comprises £88,808 cash and 146,661 ordinary shares of 25p credited as fully paid in Macfarlane, issued at £1.44 per share and ranking pari passu with existing issued Macfarlane ordinary shares.

Permission has been granted by the Council of the Stock Exchange for the 146,661 ordinary shares of 25p each to be admitted to the Official List.

R. Mitchell (Grantham), manufactures in and distributes specialist packaging materials from its two modern warehouses in Grantham, Lincolnshire.

* * *

Acco World Corporation has lifted its stake in USM-quoted Twinlock to over 52 per cent by the purchase of 4m shares at 71p each. The directors of both companies reached agreement on terms of an offer towards the end of last month. Twinlock manufactures products for storing, retrieving and displaying business information.

* * *

The offer by Pritchard Services for Spring Grove has been accepted in respect of 22,101,140 shares (66.6 per cent). As previously announced, the offer is unconditional in all respects and remains open until further notice.

UBM: bid 'not generous'

In a letter to shareholders, sent over the weekend Mr Allen Sheppard, chairman of UBM Group, says that when the Norcros bid fails the UBM ordinary share price will be "well supported by current year earnings and dividends with the prospect of further growth in the next year and beyond."

He comments that the prospective dividend yield of 7.1 per cent at the bid price is well above the average stock market dividend yield. "The bid price is not extremely generous; it is not even generous. Indeed in our opinion the bid price is no more than a reasonable stock market trading price; it certainly does not contain a proper premium for control of UBM," Mr Sheppard states.

The chairman says that given the Norcros holding, UBM's share price will be further supported by the expectation that, "having failed in its current takeover attempt, Norcros will return in 12 months' time with a higher bid."

In the letter Mr Sheppard also condemns Norcros' assumption that the UBM Pension Trust has sold its holding.

Strong recovery at Massey Ferguson

For the half year ended July 31, 1983, Massey-Ferguson Holdings, the wholly-owned subsidiary of Massey-Ferguson (Canada), achieved a £10.4m turnround to return taxable profits of £49,000. This is compared with losses of £10.36m last time and a total of £35.45m for the whole of the 15 month period.

Turnover amounted to £272.17m (£256.13m) for the six months and after tax of £160,000 (nil) and an extraordinary credit of £4.21m (£1.21m debit) earnings per share were 27.2p (98p losses).

Results reflect the benefits of the successful refinancing of Massey-Ferguson announced in March, and management actions to reduce operating costs.

Although there has been some market improvement in the UK, the market for farm machinery and diesel engines continues to be depressed. Consequently the directors say the business continues to be managed on the basis of flat volumes and operating improvements.

Allebone loss lower

Footwear manufacturer and retailer Allebone and Sons reduced its taxable losses from £156,000 to £97,000 for the half year ended July 31 1983 from turnover virtually unchanged at £6.28m against £6.27m.

As usual, there is no interim dividend and although they feel it would not be prudent to forecast results for the full year, the directors except to be able to recommend a final payment of not less than the 0.5p paid last time.

There is no tax charge

RECENT ISSUES

EQUITIES

Issue price	Amount paid up	Latest Renunc. date	1983 High	1983 Low	Stock	Closing price	+ or −	Net Div.	Times Covered	Gross Yield	P.E. Ratio
10	F.P.	7/10	24	20½	✠A. & M. Hire 10p	21	...	b0.1	11.1	0.7	13.5
¶120	F.P.	—	118	108	✠Acorn Computer 1p	108	−6	—	—	—	35.7
¶¶	F.P.	—	160	105	Assoc. Telecom	106	...	b2.0	3.1	2.7	17.0
¶230	F.P.	—	290	237	Atlantic C'mp'ters10p	275	..	b2.25	6.2	1.2	14.5
¶435	200	10.2	220	190	Brit. Petroleum	190	−8	20.25	1.9	6.8	11.8
200	F.P.	—	216	195	‡‡Bryson Oil & Gas20p	205		—	—	—	—
	F.P.	—	170	165	✠Cent'l IndTVN V50p	165		—	—	—	33.8
¶105	F.P.	—	108	107	Coin Inds. 10p	107		3.3	2.4	4.4	13.5
§60	F.P.	—	85	75	✠DJSecurityAl'ma10p	77	.....	t3.1	b3.0	3.9	9.6
140	F.P.	4/11	170	148	✠Flextech 10p	148	..	—	—	—	22.5
60	F.P.	12/10	73	65	✠Freshbake Foods 5p	73	−1	bg1.7	2.7	3.4	12.6
200	F.P.	26/10	233	203	Goring Kerr 10p	233	+1	b5.0	2.1	3.1	22.2
¶125	F.P.	23/9	187	154	Int. Signal & Control A	168	+1	uQ2c	4.0	0.8	31.3
¶¶	F.P.	—	72	55	Ivory & Sime 0.1p	65	−5	u0.35	11.8	0.5	23.0
—	F.P.	11/11	32	21	Lon. Midland IndD'fd	32		—	—	—	—
§63	F.P.	31/10	71	68	✠Mainmet Hldgs 10p	69		—	—	—	31.4
¶¶	F.P.	—	100	95	Milbury	95		4.9	1.6	7.4	12.4
§150	F.P.	4/11	161	156	✠PCT Group 10p	158		b4.8	2.1	4.5	14.9
¶¶	F.P.	—	36	32	P'sonal AssetsTst 12½p	36		—	—	—	—
185	F.P.	—	234	214	Telemetrix 5p	225	+5	b1.4	5.2	0.9	29.3
100	F.P.	—	100	94	Tottenham Hotspur	100		b4.0	1.5	5.7	11.0

FIXED INTEREST STOCKS

Issue price £	Amount paid up	Latest Renunc. date	1983 High	1983 Low	Stock	Closing price £	+ or −
99.296	£25	29/11	28	22	Allied Lyons 11¼% Deb 2009	26	−⅛
98	F.P.	28/10	101¼	96	Bristol 11½% Red. 2008	98¾	−¼
¶100	£10	—	11½	11½	Bristol Waterworks 6.5% Red. Prf. 1998	11½	
96.95	F.P.	21/10	99⅝	94½	C.C.C. Economic 13¼% Gtd. Ln. 2013	98	−½
99.75	F.P.	25/11	135¼	104¼	Cigna Overseas Finance 13% Ln. 2008	104¼	−¼
100	F.P.	27/10	104	101	E'tbourne W'rworks13½pcR.Deb.2004	103	
‡	F.P.	21/10	103¼	100	Fleming Am. Inv Tst 7% Cnv Uns Ln 99	102	
**	F.P.	30/9	104p	101p	Fuller, Smith & Turner 8% 2nd Cm. Prf	104p	
97.268	£25	—	25¼	25	Ireland 12% 2008	25¼	
¶100p	25p	9/12	33½p	25p	LASMO 9% Cum Red Pref	32p	
—	—	—	100⅝	100⅛	Nationwide 11¼% Bds 20/8/84	100½	−⅛
—	—	—	100	99⅞	Do 11% Bds 3/9/84	100	−⅛
—	F.P.	28/10	110½p	106p	Oceonics 10½% Cum. Red. Pref. 1993	110½p	+½
§100	F.P.	7/10	103p	98p	Rockware 7.7% Cum. Cnv. 2nd Pref.	98p	..
98.575	£25	31/8	98	95½	Trafford Park Est. 11½% 2007/11	96	
97.943	F.P.	14/10	101¼	96½	Transport Dev 12½% Uns Ln 2008	99¼	
99.124	£25	26/10	28½	23¼	Westland 12½% Deb 2008	26¼	−¼
¶100	F.P.	17/11	102	101½	York Waterworks 6.75pc Red. Prf. 1989	101¼	

"RIGHTS" OFFERS

Issue price	Amount paid up	Latest Renunc. date ●	Latest Renunc. date ■	1983 High	1983 Low	Stock	Closing price	+ or −
92	F.P.	—	28/10	119	104½	Anglo-Indonesian	108	−2
IR35	Nil	—	—	8pm	7pm	Aran Energy 20p	8pm	+1
80	F.P.	—	25/11	93	89	Assoc. Paper	93	..
1250cts	F.P.	—	7/10	801	755	Barlow Rand 10cts	788	+6
1	Nil	—	19/10	5½pm	3½pm	Bridgend Proc. 'A' Ord. 1p	5½pm	+1½
23	F.P.	—	30/11	27	25	C. H. Industrials 10p	26	..
48	F.P.	—	28/10	48¾	46	Cambrian & Gen. Sec.	47	..
65	F.P.	—	28/10	68	64	" " Cap. 7½p	67	..
50	Nil	—	11/11	11pm	4pm	✠Coleman Milne 10p	11pm	..
20cts	Nil	—	—	8½pm	1½pm	Eagle Corp'n. 10cts.	7pm	..
440	F.P.	—	—	575	502	Exco Int'l. 10p	535	−10
82	F.P.	—	28/10	89	70	✠Floyd Oil 10p	72	+2
85	F.P.	—	28/10	93	83	Garnar Booth	83	..
40	Nil	—	14/10	64	51	Group Lotus Car 10p	62	−1
17	F.P.	—	28/10	20	18	Helene of London 10p	18	−½
20	Nil	—	18/11	32pm	21pm	Inter-City Inv. 20p	21pm	−1
50	F.P.	—	—	88	65	‡‡Marinex Pet. 10p	65	−2
35	F.P.	—	25/11	45	40½	Munton Bros. 10p	42½	..
A82	Nil	—	7/11	73pm	63pm	Nat. Com. Bk Aust. $A1	63pm	−4
80	F.P.	—	21/10	87	80	Nesco Invs.	83	..
20	F.P.	16/9	21/10	30	24	Parkdale 10p	27	..
11	F.P.	—	25/11	28	15	✠Parkfield Foundries 5p	28	+1
120	F.P.	—	11/11	129	122	Pritchard Servs	127	−1
8½	Nil	—	—	8½pm	5½pm	✠Sampang (Java) 2½p	8½pm	..
96	F.P.	—	14/10	143	118	Steinberg 10p	118	−2
310	F.P.	—	25/10	368	340	Tate & Lyle £1	340	−5
210	F.P.	—	11/11	240	225	Utd. Newspapers	228	..

Renunciation date usually last day for dealing free of stamp duty. b Figures based on prospectus estimates. d Dividend rate paid or payable on part of capital; cover based on dividend on full capital. g Assumed dividend and yield. u Forecast dividend cover based on previous year's earnings. F Dividend and yield based on prospectus or other official estimates for 1983. H Dividend and yield based on prospectus or other official estimates for 1983-84. Q Gross. ‡ Cover allows for conversion of shares not now ranking for dividend or ranking only for restricted dividends. ⊕ Figures or report awaited. § Placing price. p Pence unless otherwise indicated. ¶ Issued by tender. ‖ Offered to holders of ordinary shares as a "rights." ** Issued by way of capitalisation. §§ Reintroduced. ¶¶ Issued in connection with reorganisation merger or take-over. ‖‖ Introduction. □ Issued to former preference holders. ■ Allotment letters (or fully-paid). ● Provisional or partly-paid allotment letters. ★ With warrants. ‡ Effective issue price after scrip † Formerly dealt in under special rule. ‡‡ Dealt in under Rule 163 (3). ✠ Unlisted Securities Market.

PENDING DIVIDENDS

Dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements except where the forthcoming board meetings (indicated thus*) have been officially notified. Dividends to be declared will not necessarily be at the amounts in the column headed "Announcement last year."

Company	Date	Announcement last year
Akroyd and Smithers	Nov 18	Final 10.0
Allied Irish Banks	Nov 8	Interim 4.5
Allnatt London Props	Nov 9	Interim 1.0
Amersham Intl	Nov 15	Interim due
Anglo Amer Corp SA	Nov 26	Interim 35c
Assoc British Foods	Nov 11	Interim 1.5
*ANZ	Nov 21	Final 14 cents
BPB Inds	Nov 23	Interim 5.0
*Bank of Ireland	Nov 10	Interim 8.0
Beecham	Nov 14	Interim 4.1
Boots	Nov 25	Interim 3.5
Brengreen	Nov 22	Interim 0.6
Brit & Cmmnwlth Shipping	Nov 11	Interim 7.0
*British Home Stores	Oct 19	Interim 1.75
Brockhouse	Nov 25	Final 0.1
*Brooke Bond	Oct 18	Final 2.665
*Bryant	Oct 17	Final 3.0
Burnett and Hallamshire	Nov 25	Interim 8.0
Burton	Nov 23	Final 5.25
Comet	Nov 24	Final 2.93
Comman Bros	Nov 22	Final nil
Courtaulds	Nov 25	Interim 1.0
Davis (Godfrey)	Nov 16	Interim 1.5
De La Rue	Nov 9	Interim 6.6
Electrocmpts	Nov 9	Interim 1.0
Elliott (B.)	Nov 23	Interim nil
Extel	Nov 25	Interim 2.5
Ferguson Industrial	Nov 15	Interim 2.2
French Kier	Nov 25	Interim 1.25
*Gerrard & National	Oct 20	Interim 6.0
*Gill & Duffus	Oct 26	Interim 3.6
Gt Portland Estates	Nov 9	Interim 1.0
Hambros	Nov 23	Interim 15.15
*Harrisons and Crosfield	Oct 18	Interim 7.5
*Hawker Siddeley	Oct 19	Interim 3.7
Heath (C. E.)	Nov 23	Interim 6.0
Hepworth (J.)	Nov 2	Final 3.21
Highland Dist.	Oct 24	Final 1.98
Hinton (Amos)	Nov 23	Interim 2.4
*Ibstock Johnsen	Oct 18	Interim 1.5
Int'l Paint	Nov 15	Final 2.0
*Johnson Matthey	Nov 23	Interim 3.0
*Kwik Save	Nov 17	Final 3.4
Land Securities	Nov 17	Interim 3.0
London Brick	Oct 28	Interim 1.951
London & L'pool Tst	Nov 16	Interim 1.5
*London and Northern	Oct 18	Interim 1.5
*Lucas Inds	Nov 7	Final 6.0
Marks and Spencer	Oct 26	Interim 1.85
*Metal Box	Nov 22	Interim 5.04
*MEPC	Nov 30	Final 5.25
National Bk Aust.	Nov 19	Final 12 cents
North British Props	Nov 3	Final 2.0
*Peachey Prop	Oct 25	Final 3.0
Polly Peck	Nov 25	Final 9.0
Powell Duffryn	Nov 25	Interim 4.7
RIT & Northern	Nov 15	Interim 2.0
Rediffusion	Nov 26	Interim 1.25
Reed Int	Nov 2	Interim 4.0
Redland	Nov 25	Interim 2.94
Ronald	Nov 25	Interim nil
Rockware	Oct 13	Interim nil
Sainsbury (J.)	Nov 3	Interim 1.9
Sketchley	Nov 16	Interim 3.6
Smiths Inds	Nov 9	Final 7.0
*Smith St Aubyn	Oct 19	Interim 1.5
Smith (W. H.)	Nov 17	Interim 1.75
*Telephone Rentals	Oct 19	Interim 2.0
Tesco Stores	Nov 17	Interim 1.25
Unilever	Nov 16	Interim 9.96
Unilever NV	Nov 16	Int. Fl 2.664
Valor	Nov 17	Interim 0.934
Wedgwood	Nov 25	Interim 1.75
Whitbread	Nov 9	Interim 1.65
*Wolseley-Hughes	Nov 2	Final 10.29

* Board meeting intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made. ¶ Forecast.

Closing prices October 14

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

12 Month High	12 Month Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
17¼	9⅝	AAR	.44	2.8	20	53	15⅞	15½	15⅝	−⅛
52⅞	23½	ACF	1.40	2.8	64	165	50¼	50⅞	50¼	
20	14⅛	AMF	.50	2.8		580	17⅞	17½	17⅝	
38¼	15	AMRCp			42	6174	28⅞	27	28¼	+1¼
18⅞	14⅞	AMR	pf2.18	12.		24	18⅛	18½	18½	
39⅞	24⅞	AMR	pf2.13	6.7		58	31⅞	31¼	31⅞	+⅞
15⅞	9½	APL			31	19	15	14⅞	15	
55	31⅞	ARA	2.05	4.0	13	302	52	51½	51½	+⅛
79⅞	43	ASA	3a	5.3		178	57	56¼	57	+½
33⅞	10	AVX	s .32	1.2	66	56	27	26⅞	26⅞	−⅛
53⅞	34½	AbtLab	1	1.9	19	1005	51⅞	51¼	51⅞	+⅝
30⅞	23⅞	AccoW	n.50	2.0	19	97	25	24¾	25	+¼
27½	16⅛	AcmeC	.40	1.7		2	23¾	23⅝	23¾	−¼
14⅞	7⅛	AcmeE	.32b	2.8	[illegible]	10	11⅝	11½	11½	−⅛
24⅞	6	AdmDg	.04	.2	20	114	24⅞	24½	24⅝	−¼
17⅞	14⅞	AdaEx	1.73e	10.		58	17½	17¼	17⅜	
19¾	6⅛	AdmMl	.24	1.5	6	129	16⅞	15¾	15¾	−1¼
18⅞	8⅞	Advest	s.12	.9	7	74	13⅞	13⅞	13⅞	−⅛
34⅞	10⅞	AMD			54	1087	32	31⅞	31⅞	+¼
24⅞	12⅞	Aeflex	s		17	35	16⅞	16⅞	16⅞	−⅛
44⅞	32⅞	AetnLf	2.64	7.1	7	1921	37¼	37	37⅞	−½
65	55½	AetL	pf5.18e	9.2		303	56½	56¼	56½	+⅛
40½	17¼	Ahmans	.60	2.0	17	1124	30⅞	30¼	30¼	+½
7⅞	2½	Aileen				37	4⅞	4½	4⅞	−⅛
51	29⅞	AirPrd	1	2.1	13	123	47⅞	47¼	47½	+⅛
27¼	13⅞	AirbFrt	.60	2.4	24	1	24½	24½	24½	+⅛
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

B—B—B

C—C—C

D—D—D

E—E—E

F—F—F

G—G—G

H—H—H

I—I—I

J—J—J

K—K—K

L—L—L

M—M—M

N—N—N

Continued on Page 25

AMERICAN STOCK EXCHANGE COMPOSITE CLOSING PRICES

Closing prices October 14

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
22⅝	7¾	AAV	.32	2.1	14	6	15½	15½	15½	+ ¼
4¼	3	AICPb				4	3¾	3¾	3¾	
6⅛	2	ATI				26	2⅝	2½	2⅝	+ ⅛
12¼	2⅞	AcmePr			9	3	6⅛	6	6⅛	
19½	11⅞	AcmU	s .32	2.2	17	2	14⅝	14⅝	14⅝	− ¼
14½	1⅛	Acton	s		10	122	12¾	12½	12¾	+ ⅜
12	6	Actons	.11	1.3	36	79	7½	7½	7½	+ ¼
6½	1⅛	Acm	wi			1	3⅜	3⅜	3⅜	
8	1⅛	AdmRs				23	4⅜	4⅜	4⅜	− ⅛
30⅛	16⅛	AdRusl	s .10	.4	16	3	25½	25⅜	25⅜	
28⅞	14¾	Adobe	.20	.9	15	45	22¼	21⅝	22¼	+ ½
5⅛	2	AegsCp			15	286	4⅛	4⅛	4⅛	
7	4	Aeronca			9	38	4⅝	4½	4⅝	+ ⅛
45	18½	AfilPb	s .64	1.5	19	85	44⅝	42⅞	44⅛	+ 2⅛
17½	4	AfiSix			10	29	12⅝	12⅜	12⅜	− ⅛
15½	5⅞	AirExp				8	7	6⅞	7	+ ⅛
6⅛	4⅞	Alamc	a		11	53	5½	5⅜	5½	+ ⅛
20⅞	4¼	AlbaW	.15e	1.1	12	11	13⅞	13½	13½	
12⅝	7¼	AlmyS		1.7		1	11⅝	11⅝	11⅝	+ ⅛
28⅛	15⅞	Alphal	s .05	.2	31	28	22½	22⅛	22⅜	− ¼
22	9⅞	Altamil	.40	1.8	12	3	21⅝	21⅝	21⅝	
1⅞	⅛	Altec	v			99	⅛	½	⅝	+ ⅛
2⅞	1⅛	Altex				113	2¼	2	2⅛	+ ⅛
32½	11¼	AlzaCp				821	18	17¾	17⅞	− ⅛
29⅞	12½	Amdhl	s .20	1.1	53	328	19	18½	19	+ ⅜
25⅝	6⅞	Amedc	s .08	.5	21	82	17⅝	16⅝	16⅝	−1
7½	3½	ABilt	n .15	2.6	33	12	5⅝	5⅝	5⅝	+ ¼
5	1½	AmCap				32	3⅝	3¼	3¼	
44⅝	15	AExp	wt			12	28	27⅝	27⅝	− ⅜
15½	7	Alsrael			2	138	7⅛	d6½	6⅞	− ½
19⅝	9⅛	AMzeA	.52	3.2	63	7	16⅞	16⅛	16⅞	+ ½
19¼	3¼	AMBld	s			812	5⅝	4⅞	5⅛	− ¼
[illegible]										

B—B—B [illegible]

C—C—C [illegible]

D—D—D [illegible]

E—E—E [illegible]

F—F—F [illegible]

G—G—G [illegible]

H—H—H [illegible]

I—I—I [illegible]

J—J—J [illegible]

K—K—K [illegible]

L—L—L [illegible]

M—M—M [illegible]

N—N—N [illegible]

O—O—O [illegible]

P—Q [illegible]

R—R—R [illegible]

Continued on Page 33

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

Continued from Page 24

[illegible]

O—O—O [illegible]

P—Q [illegible]

R—R—R [illegible]

S—S—S [illegible]

T—T—T [illegible]

U—U—U [illegible]

V—V—V [illegible]

W—W—W

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
[illegible]										
47⅞	24½	WalLm	1.20	3.4	11	211	35⅝	35¼	35⅜	[illegible]
51⅛	26½	WalJ	pf1.60	4.2		1	38	38	38	[illegible]
36¼	18⅝	Warnc	s .70	2.5	11	210	28½	28	28¼	[illegible]
59⅝	19⅞	WrnCm		1.4	4	6589	23	20⅜	22⅞	[illegible]
35	25¾	WarnrL	1.40	4.6	13	934	31	30⅝	30⅝	[illegible]
29½	24¼	WashGs	2.88	9.9	7	74	29⅛	28¾	29	[illegible]
37⅛	18⅞	WshNat	1.08	3.7	12	300	29⅛	28¾	29½	[illegible]
22⅛	18½	WshWt	2.48	12	7	180	20⅝	20⅛	20⅛	[illegible]
61⅞	39½	Waste	.68	1.6	17	4959	43	41¼	42	[illegible]

Continued on Page 33

Sales figures are unofficial. Yearly highs and lows reflect the previous 52 weeks plus the current week, but not the latest trading day. Where a split or stock dividend amounting to 25 per cent or more has been paid, the year's high-low range and dividend are shown for the new stock only. Unless otherwise noted, rates of dividends are annual disbursements based on the latest declaration.

a—dividend also extra(s). b—annual rate of dividend plus stock dividend. c—liquidating dividend. cld—called. d—new yearly low. e—dividend declared or paid in preceding 12 months. g—dividend in Canadian funds, subject to 15% non-residence tax. i—dividend declared after split-up or stock dividend. j—dividend paid this year, omitted, deferred, or no action taken at latest dividend meeting. k—dividend declared or paid this year, an accumulative issue with dividends in arrears. n—new issue in the past 52 weeks. The high-low range begins with the start of trading. nd—next day delivery. P/E—price-earnings ratio. r—dividend declared or paid in preceding 12 months, plus stock dividend. s—stock split. Dividends begins with date of split. sls—sales. t—dividend paid in stock in preceding 12 months, estimated cash value on ex-dividend or ex-distribution date. u—new yearly high. v—trading halted. vi—in bankruptcy or receivership or being reorganised under the Bankruptcy Act, or securities assumed by such companies. wd—when distributed. wi—when issued. ww—with warrants. x—ex-dividend or ex-rights. xdis—ex-distribution. xw—without warrants. y—ex-dividend and sales in full. yld—yield. z—sales in full.

INSURANCE

Revenue probes Lloyd's links with tax havens

BY JOHN MOORE, CITY CORRESPONDENT

THE INLAND REVENUE has been probing the relationship of working underwriters in the Lloyd's insurance market with companies in offshore tax havens.

The investigation in progress for some months, has been precipitated by controveries in the Lloyd's market about underwriters' use of offshore companies in which they have direct and indirect shareholdings for business purposes.

This investigation is being carried out under Section 481 of the Income and Corporation Taxes Act, relating to the Revenue's power to obtain information. The tax authorities are studying relationships of underwriters with offshore companies dating back to 1974.

Embarrassment

The Revenue originally intended a much wider investigation, in which it would call for all papers lodged with Lloyd's central administrative authorities in an effort to identify cases of extensive tax evasion by Lloyd's professionals. That was at the beginning of this year.

Mr Ian Hay Davison, Lloyd's chief executive, managed to head the Revenue off when he was appointed to his post at the beginning of this year. He said that if the Revenue seized papers from Lloyd's central authorities it would be impossible for Lloyd's to carry out its own investigations into alleged irregularities.

Lloyd's is investigating allegations that several underwriting agents, the groups which look after the affairs of underwriting members, have siphoned off millions of pounds of funds belonging to the underwriting membership into offshore companies which agency executives or other Lloyd's professionals have, say the allegations, secretly controlled in offshore tax havens.

For the Inland Revenue the allegations which have surfaced in the Lloyd's market have become something of an embarrassment.

For years Lloyd's has owed a large part of its commercial success to the tax advantages it offers to those who seek membership of the market.

Lloyd's has developed as an onshore tax haven offering considerable benefits to the high taxpayer.

It is these tax benefits which have largely attracted more than 17,000 outsiders, with little knowledge of insurance, to pledge the entirety of their wealth to allow Lloyd's to function. In return they have received a share of the profits and tax benefits.

Mr Davison told the revenue, when it proposed its extensive investigation, that Lloyd's tax privileges represented "the fundament of the financial success of this institution. It is vital to the welfare of Lloyd's that these privileges are retained."

The historically benign approach of the revenue to Lloyd's affairs has been compromised by the scandals which have surfaced.

This is how it happened. Over the years Lloyd's underwriting agencies have argued that it is necessary to build up considerable reserves to meet future insurance losses.

Those reserves are built up out of revenue and profits which might otherwise be credited to the overall underwriting results of an underwriting member in any one year.

Rollover

The revenue has traditionally remained wary, suspecting that reserves are being built up only to depress the amount of declared taxable profits by underwriting members in any one year of account, and reduce individuals' tax liabilities.

In other words the Revenue has suspected that reserves are used for tax avoidance purposes rather than a genuine reserving function. However, it has tended to be tolerant of underwriters' use of reinsurance.

Through reinsurance arrangements underwriters can warehouse their underwriting profits with offshore companies, paying out a reinsurance premium for a large part of its commercial success to the tax advangetes the "contract," which in turn will reduce the amount of income disclosable to the Revenue authorities in the UK.

Under the terms of the "contract," the premium may be returned to the underwriters at a later date from the companies in the tax havens where the funds are lodged.

The Revenue has tended to turn a blind eye to this form of offshore rollover fund, which has type of contractual respectability.

But what has annoyed the Revenue is the fact that underwriting agents and other Lloyd's professionals have held undisclosed interests in the companies with which the funds are lodged.

Disclosure

The Lloyd's professionals have been deriving money in the form of dividends and other payouts tax-free through the companies with which rollover funds have been established.

Until now the Lloyd's professionals have not usually disclosed these shareholding interests to the Revenue. The Revenue is attempting through its investigation to discover how much it has lost through these secret arrangements.

For the moment the Lloyd's authorities hope that they have headed off more detailed inquiry by the Revenue through insisting that the market's professionals must make more disclosure. The Lloyd's professionals themselves are saying that the Revenue authorities need to take a more understanding approach to reserving, otherwise the use of reinsurance will only be encouraged.

Mr Davison has told the market that Lloyd's tax privileges are not in danger, "save if they are flouted or abused.

"It, therefore, must be in Lloyd's interest to be punctilious in the observance of the tax regulations in order that we may continue to enjoy the benefits that we all have."

APPOINTMENTS

Managing director designate for Declan Kelly Group

The DECLAN KELLY GROUP, builders, has appointed Mr Douglas Middleton as group managing director designate. He will have management responsibility for all aspects of the company's operations, including Kelly Homes, Retirement Community Homes, Feastbrook, and Declan Kelly Associates. He has been contracts director for Martin Grant Homes since 1977. New sales and marketing director designate is Mr Gary Ingram, who is currently a manager with the Leeds Permanent Building Society, Crawley. Both appointments are from the end of October.

★

At Allied Breweries Management Services Ltd (MSL), part of the Allied Lyons Group, Mr Bob Bramley has been appointed managing director. He joins from Massey-Ferguson where he was director of systems development for Europe in 1981.

★

Mr Stanley Charles has been appointed deputy chairman of COMPUTERS, Cambridge-based manufacturer of the Lynx range of microcomputers. He is a partner in stockbrokers Statham Duff Stoop.

★

Mr Barry J. Solomon has joined the NATIONAL FREIGHT COMPANY as chief pensions officer. He joins from TI Group where he has been the pension fund manager and secretary since 1977. He replaces Mr John Ager, who will shortly be leaving the NFC.

★

Mr Albert S. Humphrey (U.S.) has been elected a main board non-executive director of SANBROS ENTERPRISES. He has also joined the main board of Merlin Industries, and one of its subsidiaries, Deacon Knitting Co.

★

Mr M. A. Butt has been appointed chairman of SEDGWICK UK in succession to Mr R. C. Steven. Mr Butt will continue as chairman of Sedgwick International and Mr Steven will remain a director of Sedgwick Group until his retirement on December 31.

★

TOSHIBA INTERNATIONAL CO has appointed Mr R. G. Robertson as general manager—instrumentation division for the European area. He was formerly vice-president Euro-Africa operations for Taylor Instrument, New York, and managing director of Taylor Instrument UK, Stevenage.

★

Mr Clive Steiner, of Clive Steiner and Associates, has become executive director of finance of BUCK FILM LABORATORIES. He has also become non-executive chairman of Alderman Press.

★

At the NATIONAL INDUSTRIAL FUEL EFFICIENCY SERVICE Mr W. Short, a director, and, until recently, national manager, has been appointed chairman. Mr N. E. Charlesworth a director, has been appointed chief executive.

★

GUILDWAY has appointed Mr Michael Whitworth as financial director. He joined in 1970 as accountant.

★

GRIEVESON GRANT AND CO, stockbrokers, is taking into partnership Mr M. G. Bedford and Dr Bernard Donoughue.

★

WARD WHITE GROUP has formed a divisional board for controlling non-retail footwear interests in the UK. Mr J. G. Dodson is appointed chairman; Mr P. G. Arber, managing director; and Mr G. I. Lewis, finance director. The following companies will comprise the division: Buckby Bros, George Ward Footwear, John White Footwear, John White Tuf Footwear, Portland Shoes, Shoes for Leisure, and Ward White Footwear Overseas. Each will retain its present identity with its own directors and management but will come under the overall control of the divisional board.

★

Mr Eric Thurston, formerly retail sales and marketing director at CROWN PAINTS, has also been made responsible for trade products and becomes sales and marketing director for total UK decorative paints.

★

Mr Tony Keech has been appointed managing director of GEISCO in the UK and the Republic of Ireland. He succeeds Mr Harold Stover, who has been appointed head of GEISCO in Northern Europe.

★

Lt Col W. Kemmis Buckley will retire from the chairmanship of BUCKLEY'S BREWERY on October 18. He will stay on the board as president for a further three years. The new chairman will be Mr Griffith W. G. Philipps. Mr Colin P. Thomas and Mr Gerald A. Hansard have been appointed joint managing directors.

★

Mr James A. Miller-Day, who has been with Schroder Asia Securities since January, and Mr John D. Spillum, formerly with Sanyo Securities, Tokyo, have been appointed directors of SCHRODER ASIA SECURITIES (HONG KONG). Mr Miller-Day will continue to be resident in London and Mr Spillum has additionally been appointed the first Tokyo representative of Schroder Asia Securities (Hong Kong) and will open the Tokyo representative office in November.

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interims or finals. The sub-divisions shown below are based mainly on last year's timetable.

TODAY

COMPANY MEETINGS—
Framlington, Whitbread's Brewery, Chiswell Street, EC, 12.00
BOARD MEETINGS
Finals:
B.P.M.
Bryant
Cradley Print
Interims:
Erith
Seafield Gentex
Sumner (Francis)
Western Brothers
DIVIDEND & INTEREST PAYMENTS—
Allied Irish Banks Notes 1992 $494.82
Babcock Intnl 3.4p
Blue Circle Inds 6p
Clark (Matthew) 7p
Die Erste Osterreich Spar-Casse Notes 1992 $497.83
Dixons 2.64p
Johannesburg Cons Invest 315.0547p
Magnolia (Mouldings) 0.6p
Petrocon 1.25p
Weber 5p
Woodward (H.) 0.5p

TOMORROW

COMPANY MEETINGS—
Comoco, 7 Albyn Place, Edinburgh, 11.00
Fleming Japanese Invest Trust, P & O Building, 122 Leadenhall Street, EC, 11.15
Heelamat, Great Northern Hotel, Kings Cross, N, 11.30
Howard Shuttering, The Worcester, Malden Road, Worcester Park, Surrey, 10.30
Ricardo Consulting Engineers, St. Ermin's Hotel, Caxton Street, SW, 12.00
BOARD MEETINGS
Finals:
Brooke Bond
Castle (G. B.)
Paterson Zochonis
Raines
Interims:
Davies and Newman
Edith
Firmin
Harrisons and Crosfield
Hunting Petroleum Services
Lawrence (Walter)
London and Northern
More O'Ferrall
Mstrock Johnsen
Wh-tt-natna Intnl
DIVIDEND & INTEREST PAYMENTS—
Bergen Bank AS Notes 1991 $20.67
Comoco 3.6p
County Properties 1.65p
Motorola 40 cts.
Sharna Ware 0.9p
Thorpac 1p
Wolstenholme Rink 2.5p

WEDNESDAY OCTOBER 19

COMPANY MEETINGS—
Christie-Tyler, Brynmenyn, Bridgend, 12.00
F & C Eurotrust, 1 Laurence Pountney Hill, EC, 2.30
United Real Property Trust, Europa Hotel, Grosvenor Square, W, 12.00
BOARD MEETINGS
Finals:
Eleco
Grosvenor
Martin (R. P.)
Medminster
Quest Automation
TSW-Television South West
Interims:
British Home Stores
City of Oxford Investment Trust
Duport
Folkes (John) Hefo
Hawker Siddeley
Jessel Toynbee and Gillett
Marshalls Universal
Securities Trust of Scotland
Smith St Aubyn
Sun Life Assurance Society
TR North American Investment Trust
Telephone Rentals
DIVIDEND & INTEREST PAYMENTS—
Bairstow Eves 0.805p
Canadian Pacific Enterprises 20 cts.
Charterhouse Petroleum 0.25p
Collins (William) 3.5p, A 3.5p
Heelamat 3.6p
Howard Shuttering 1p
Industrias Penoles SA De CV Notes 1989 $281.11
London United Invests 5p
Royal Dutch Petroleum NV 76.94881p
TR Pacific Basin Invest Trust 1p
Ynys Mon-Isle of Anglesey Borough Council 1983 £5.65625.

THURSDAY OCTOBER 20

COMPANY MEETINGS—
Atlantic Assets Trust, Caledonian Hotel, Princes Street, Edinburgh, 12.15
Capper-Neill, Neills Road, Bold, St Helens, Merseyside, 2.30
Dowding and Mills, Chamber of Commerce, 75 Harborne Road, Birmingham, 12.00
Elbief, Prince of Wales Lane, Birmingham, 12.00
Estates Property Invest, Armourers Hall, 81 Coleman Street, EC, 12.00
Fleet, London Intntl Press Centre, New Street Square, EC, 12.00
Harvey and Thompson, 2 Merrow Street, SE, 11.00
Haynes Publishing, Manor Hotel, Yeovil, Somerset, 12.00
Newmark (Louis), 143-149 Great Portland Street, W, 12.00
Siebe Oil, 21 New Street, Bishopsgate, EC, 12.00
Telefusion, Connaught Rooms, Great Queen Street, WC, 12.00
BOARD MEETINGS
Finals:
Low (William)
SI Group
Welkom Gold Mining
Interims:
Anchor Chemical
East Rand Gold and Uranium
General Scottish Trust
Gerrard National
Lilley (F. J. C.)
London Atlantic Investment Trust
Scottish Mortgage and Trust
Selincourt
Sound Diffusion
DIVIDEND & INTEREST PAYMENTS—
Church and Co. 5p
Dowding and Mills 1.29p
F & C Eurotrust 1.55p
Islington Corpn 11.9 per cent 2017 5.95 per cent
JSD Computer Intntl 0.6p
Jacobs (John I.) 1p
Ladbroke 4.07p
Mid Wynd Intntl Invest Trust 1p
Quick (H. J.) 0.55p
Sennah Rubber 25p
Wells Fargo 48 cts.

FRIDAY OCTOBER 21

COMPANY MEETINGS—
Breville Europe, Angel Hotel, High Street, Guildford, Surrey, 11.00
Bristol Channel Ship Repairers, Channel Dry Dock, Cardiff, 11.30
Land Investors, Churchill Hotel, Portman Square, W, 12.00
Nolton, Berystede Hotel, Bagshot Road, Ascot, Berkshire, 11.30
Watsham's, Church End Works, High Road, Willesden, NW, 12.00
BOARD MEETINGS
Finals:
Goodman Bros
Lowland Investment
North Sea Assets
Interims:
Bluemel Bros
Cook (William) (Sheffield)
Midsummer Inns
Unigate
DIVIDEND & INTEREST PAYMENTS—
Aerospace Engineering 6.5p
Alliance Trust 4p, 4pcPf 1.4p, 4½pcPf 1.4875p, 5pcPf 1.75p, 3½pcDb 1975-85 1¾pc
Anglo American Gold Invest 300.46614p
Berry Pacific 2 cts.
English and New York Trust 1p
Holt (Joseph) 3p
House Property of London 3p
Invergordon Distillers 1.5p
Johnstone's Paints 1.765p
Morgan (J. P.) 92.5 cts.
Newmark (Louis) 7.5p
Oesterreichische Kontrollbank AG Notes 1986 $22,716.15
Philippines Notes 1986 $244.64
Ricardo Consulting Engineers 6.5p
Second Alliance Trust 8p, 4½pcPf 1.575p
Sharpe (W. N.) 4.5p, A 4.5p
Sweden Rds 1991 $132.57
Wagon Finance 0.625p
Watsham's 6.35p

SATURDAY OCTOBER 22

DIVIDEND & INTEREST PAYMENTS—
Longton Ind 1p

CONTRACTS

Wind turbines to be built in Wales

VERTICAL AXIS WIND TURBINES, a company owned by Sir Robert McAlpine and Sons and NEI Cranes, has received three contracts together worth around £3m from the United Kingdom Atomic Energy Authority for the development of the variable geometry vertical axis wind turbine, invented by Dr Peter Musgrove. The contracts form part of the Department of Energy's Wind Energy R & D programme which the UKAEA manages.

These contracts provide for the detailed design and construction of a 25-metre-diameter prototype hosted by the CEGB at Carmarthen Bay power station, South Wales. This prototype will be a quarter-scale model of the ultimate objective of the development, a 100-metre-diameter multi-megawatt wind turbine for both onshore and offshore applications.

The prototype will have a rated power capture of 160 kW and will be linked to the South Wales Electricity Board grid at Carmarthen Bay. The 25-metre-diameter rotor will have two 18-metre-high blades, and will be carried on to a 25-metre-high cylindrical concrete tower. Design and construction is expected to be substantially complete by the end of next year.

The second contract provides for a two-year test and monitoring period, while the third provides for preliminary design work necessary for the detailed design of the proposed 100-metre-diameter multi-megawatt version.

The preliminary work will mainly consist of dynamic analysis and aeroelastic studies, but initial design work will be carried out on the civil mechanical engineering and electrical components of the machine to facilitate these mathematical analyses.

★

University and polytechnic courses in structural steel design are to benefit from a £150,000 British Steel Corporation grant, aimed at developing a comprehensive set of teaching aids, including video guides. British Steel is taking this initiative in association with the steel construction industry and after consultations with steel fabricators and consulting engineers. This is a collaborative venture, involving all the university and polytechnic lecturers who teach steel design, under the overall chairmanship of Professor Patrick Dowling of Imperial College, London. An advisory panel has been nominated by industry and other universities. The project is being administered from Imperial College, with Dr Graham Owens, department of civil engineering, as project manager.

★

British Gas, British Rail, British Waterways, North West Water and the Central Electricity Generating Board have together awarded a total of £4m civil engineering and building work to GEORGE DEW AND CO. This includes a warehouse at the management and support base for the Morecambe Bay gasfield project in a £1.88m contract awarded by Hydro-Carbons (GB), a wholly-owned company of British Gas. For British Rail, Dew will construct an underbridge and diversion at Walthamstow, valued at £462,000. At Capenhurst Dew will carry out £230,000 modifications and extensions for CEGB. For North West Water, western division, Scotsfield sewage screening works at Wallasey is valued at £1.25m, and for British Waterways a £300,000 contract for canal wall repairs at Western Point, Runcorn and Anderton, Northwich.

★

Recent contracts awarded to SINDALL CONSTRUCTION amount to over £3m. They are as follows: modernisation scheme in Garvary Road, E16, for the London Borough of Newham, value £486,000; refurbishment to the main Burleigh Street premises for the Cambridge and District Co-operative Society, value £853,000; housing at Cannhall Road/Woodhouse Road, Leytonstone, for the London Borough of Waltham Forest, value £1.0m; old people's home in Royston, for Hertfordshire County Council, value £588,000.

★

TARMAC CONSTRUCTION and PERCY BILTON, have signed a £1.7m contract for roadworks and sewers to herald a start on the multi-million pound National Garden Festival, to be held in Stoke on a special 176 acre site. A Government grant is backing the scheme, which is on the site of the former steelworks at Shelton, where up to £8m will be invested by 1986.

BASE LENDING RATES

A.B.N. Bank	9 %
Allied Irish Bank	9 %
Amro Bank	9 %
Henry Ansbacher	9 %
Arbuthnot Latham	9 %
Armco Trust Ltd.	9 %
Associates Cap. Corp.	9½%
Banco de Bilbao	9 %
Bank Hapoalim BM	9 %
BCCI	9 %
Bank of Ireland	9 %
Bank Leumi (UK) plc	9 %
Bank of Cyprus	9 %
Bank of Scotland Ω	9 %
Banque Belge Ltd.	9 %
Banque du Rhone	10 %
Barclays Bank	9 %
Beneficial Trust Ltd.	10 %
Bremar Holdings Ltd.	9 %
Brit. Bank of Mid. East	9 %
■ Brown Shipley	9½%
CL Bank Nederland	9 %
Canada Perm't Trust	10 %
Castle Court Trust Ltd.	9½%
Cayzer Ltd.	9 %
Cedar Holdings	10 %
■ Charterhouse Japhet	9 %
Choulartons	10½%
Citibank Savings §	10½%
Clydesdale Bank	9 %
C. E. Coates	9½%
Comm. Bk. of N. East	9 %
Consolidated Credits	9½%
Co-operative Bank *	9 %
The Cyprus Popular Bk.	9 %
Dunbar & Co. Ltd.	9 %
Duncan Lawrie	9 %
E. T. Trust	9½%
Exeter Trust Ltd.	10 %
First Nat. Fin. Corp.	11½%
First Nat. Secs. Ltd.	11½%
Robert Fraser	10 %
Grindlays Bank ‡	9 %
■ Guinness Mahon	9 %
■ Hambros Bank	9 %
Heritable & Gen. Trust	9 %
■ Hill Samuel §	9 %
C. Hoare & Co. †	9 %
Hongkong & Shanghai	9 %
Kingsnorth Trust Ltd.	10 %
Knowsley & Co. Ltd.	9½%
Lloyds Bank	9 %
Mallinhall Limited	9 %
Edward Manson & Co.	10½%
Meghraj and Sons Ltd.	9 %
Midland Bank	9 %
■ Morgan Grenfell	9 %
National Bk. of Kuwait	9 %
National Girobank	9 %
National Westminster	9 %
Norwich Gen. Tst.	9 %
R. Raphael & Sons	9 %
P. S. Refson & Co.	9 %
Roxburghe Guarantee	9½%
Royal Trust Co. Canada	9 %
Standard Chartered ‖	9 %
Trade Dev. Bank	9 %
TCB	9 %
Trustee Savings Bank	9 %
United Bank of Kuwait	9 %
United Mizrahi Bank	9 %
Volkskas Intnl. Ltd.	9 %
Westpac Banking Corp.	9 %
Whiteaway Laidlaw	9½%
Williams & Glyn's	9 %
Wintrust Secs. Ltd.	9 %
Yorkshire Bank	9 %

■ Members of the Accepting Houses Committee.
* 7-day deposits 5.5%, 1-month 5.75%. Short-term £8,000/12 months, 8.1%.
† 7-day deposits on sums of: under £10,000 5½%, £10,000 up to £50,000 6½%, £50,000 and over 7½%.
‡ Call deposits £1,000 and over 5½%.
‖ 21-day deposits over £1,000 6½%.
§ Demand deposits 5½%.
¶ Mortgage base rate.
Ω Money Market Cheque Account—9.00%. Effective annual rate—9.38%.

FINANCIAL TIMES SURVEY

Monday October 17 1983

Danish Exports

The restoration of a more satisfactory equilibrium in the external account, the Budget and employment, promises to be a hard slog and may take several years but the view at the moment is that the Government has made a good start to restoring Denmark's economic health

Better signs of economic health

DENMARK is being given a course of shock treatment by the four-party, non-socialist, coalition of Conservatives, Liberals, Centre Democrats and the Christian People's Party led by Prime Minister Poul Schlüter which took office in September last year.

The coalition has made a determined attack on excesses of welfare spending, cutting spending in areas hitherto held to be sacrosanct, and it has suspended, probably for good, the Danish version of the *scala mobile*, the indexation of wages and salaries.

By HILARY BARNES in Copenhagen

At the opening of the Folketing (Parliament) on October 4, the Government launched a programme to supplement the restrictive measures with measures for "growth through modernisation."

The proposals include incentives for business investment, investment in shares and the spread of share ownership, for the increased use of the equity market by business as well as reductions in the steep, 2.2 per cent wealth tax and the replacement of the sharply progressive income tax with a tax rate which is equal for the first and last krone earned.

However, the Government is a minority administration which must obtain support from two such disparate parties as the social-Liberal radical party to its left and the anti-tax Progress Party to its right.

Mr Schlüter has always said that he intends to stay in office until the next election becomes mandatory in the autumn of 1985 and he has been prepared to swallow defeats on less vital matters if he can win backing for the essential elements of his programme for economic recovery.

The longer the Government stays in office, however, and the greater become the pressures on the Radical Party to vote for spending cuts, and the Progress Party for revenue-raising measures, which at heart they oppose, the more likely it becomes that the slender bonds which have so far kept the Government in office will break.

In a Folketing in which there are nine parties, as well as a handful of independents, accidents can easily happen.

Denmark is essentially a well-run country, although it sometimes belies this reputation. The fractionalised parliament has led to a general election every two years since 1971, but the impression of instability which this gives is superficial. The ideological distance between the extremes is small, and divisions are not exacerbated by ethnic or religious differences. When unpopular measures can no longer be postponed, as the events of the past year have shown, majorities emerge within Parliament to take them.

In matters of economic management, too, Denmark has at times given an impression of irresponsibility, or as the governor of the Central Bank, Mr Erik Hoffmeyer, said a couple of years ago, of a rake's progress.

The present government took over after eight years of governments headed by Mr Anker Jørgensen, the Social Democratic leader, who in the wake of the oil price increases of 1973-74 and 1979 faced difficult problems. Yet, while there may have been mitigating circumstances, the consequences were serious.

Continued current balance of payments deficits boosted the net foreign debt from around 15 per cent of the gross domestic product in 1975 to about 33 per cent at the end of 1982; the budget balance moved from a small surplus in 1975 to a deficit of almost 13 per cent of the gross domestic product as public expenditure soared to 61 per cent of the GDP; interest rates rose to about 22 per cent by last autumn; and unemployment increased from about five to almost 10 per cent over the same period.

The counter-attack launched by Mr Schlüter and his finance minister, Mr Henning Christopherson, the Liberal Party leader, has so far brought some impressive results, helped, it must be said, by favourable international trends, such as falling oil prices and an easing of international interest rates. Luck, however, is a useful political attribute and so far Mr Schlüter seems to have had it.

The balance of payments deficit in the first half was almost halved, from Kr 9.8bn to Kr 5.1bn, with the trade balance (imports and exports both fob—with imports cif there was still a small deficit) in surplus for the first time for 20 years. Inflation has fallen from about 10 per cent in 1982 to six per cent, and it is still falling. The average effective interest rate in the bond market has fallen from 22 per cent last autumn to about 13.5 per cent, and should fall further this autumn.

The krone exchange rate has been stabilised after a period during which the Social Democrats permitted several small devaluations. Business confidence has returned, at least in statements coming from business leaders, and there are, too, some early signs that industrial investment plans may be recovering. The share price index has almost doubled since the beginning of the year after near-stagnation over the past 10 years.

The main instruments used by the Government to achieve these results have been incomes policy and control over public expenditure. The Government, in suspending indexation of wages and salaries last autumn, declared that in the next two years wages should not rise by more than four per cent a year.

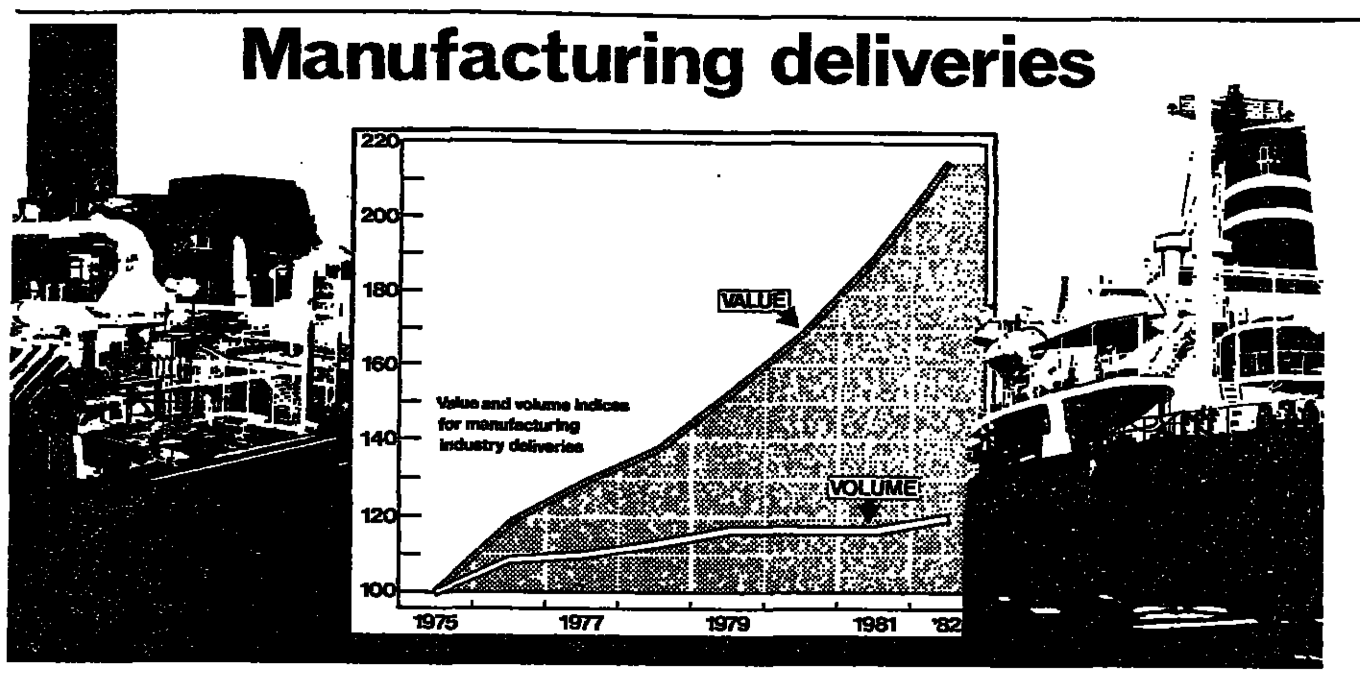
Following the collective wage negotiations last spring, the increases will in fact be slightly higher, probably 5-6 per cent a year, but this is still the lowest rate of increase since 1960.

Cuts in public expenditure, combined with a number of increases in taxes brought the budget deficit for 1983 down from the DKr 80bn which it would have reached without government action to an actual level of about DKr 63bn—about 12.4 per cent of the GDP.

Social welfare spending was not spared from the Government axe. The indexation of the maximum unemployment benefit rate was suspended; sickness compensation for the first day off work with illness was abolished; the rules for the payment of supplementary social welfare benefits were tightened up. These measures hurt the economically weak, but Mr Schlüter made no bones about the fact that his policies would hurt, saying repeatedly, "there is no way we can control public spending without tackling social welfare spending.'

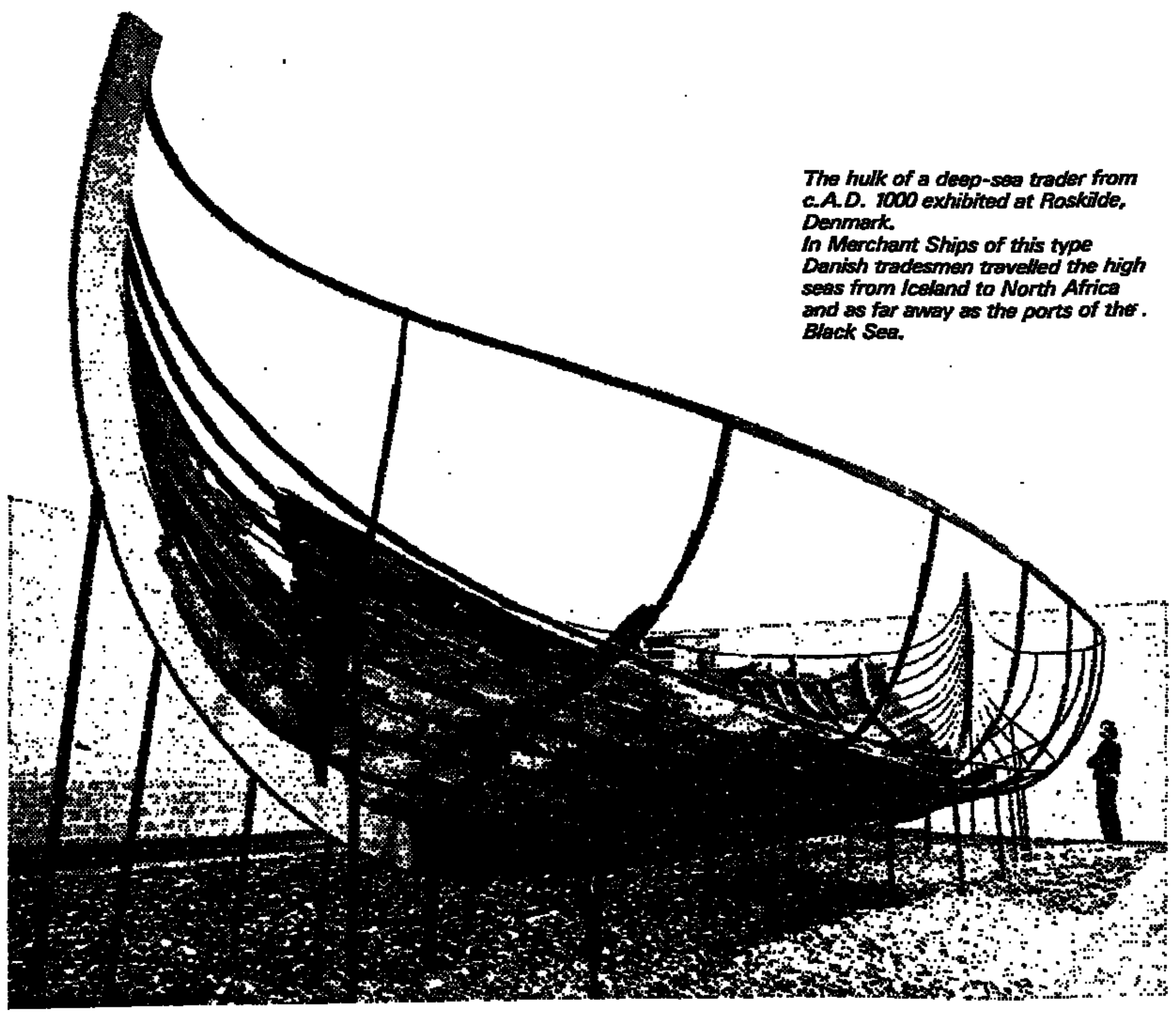
In the 1984 draft budget, which will be the chief subject of parliamentary controversy this autumn, the Government plans to reduce the budget deficit from DKr 63bn this year to DKr 59bn, the first time since 1976 that it will have fallen, and from 12.4 to 10.9 per cent of the GDP. If interest rates continue to fall, the deficit could well come out well below this figure.

CONTINUED ON NEXT PAGE



CONTENTS

This survey has been written by Hilary Barnes in Copenhagen. Editorial production: Arthur Dawson. Design: Philip Hunt.



Bickering leads to disenchantment

Relations with EEC

DANISH EXPORT developments over the past few years reveal some surprising trends. As a high cost country which needs to export products with a high element of value added. the growth of exports of pharmaceuticals and electronic products is expected, but who would have forecast that the Danish furniture industry, by any definition a traditional industry, would show the fastest export growth of any of the Danish manufacturing sectors?

But, furniture exports between 1975 and 1982 increased by no less than 300 per cent. Pharmaceutical exports over the same period increased by 267 per cent, but the prize for the fastest growth of all went to pelts—Denmark is the world's biggest exporter of mink pelts—which increased in value by 329 per cent.

It also comes as a surprise, after reading of the complaints of the fishermen and the fish processing industry, to find that exports of fish and fish products were one of the fastest growers over this period, increasing by 247 per cent.

It is also unexpected to find that agricultural exports, which declined from 58 per cent to about 28 per cent of Danish exports from 1960 to 1972, have maintained their share of exports at roughly this level ever since, sustained by the European Community's Common Agricultural Policy.

The Danes have a somewhat uneasy relationship with the EEC, which is unpopular with the public. Opinion polls consistently show that if there were a referendum on membership, there would be a two-to-one majority against, reversing the result of the 1972 referendum.

There is however, an overwhelming majority in the Folketing supporting membership; the LO—the Danish TUC—strongly supports it (but not all its member unions do); and business organisations are in favour of it. The country's leaders are too well aware of the economic benefits of EEC membership, as well as appreciating the opportunities which is gives a tiny country to have its say in the wider affairs of Europe, to look a gift horse in the mouth, but the public at large is worried by the prospect, real or imagined, of the community's growing political influence over Denmark's freedom of manoeuvre and disenchanted by the image of constant bickering which Community disputes over agriculture, the budget, fisheries, and so on, manage to give the Community.

The two industries to benefit especially from EEC membership are agriculture and fisheries. Historically, Denmark together with the UK and Norway has been one of the biggest of the North Sea fisheries nations and defends its rights in the EEC against this background. As Denmark's own North Sea waters cover a small area of not much interest in fishing terms, the fishing industry would not be able to survive without the EEC.

The CAP brings Denmark two main benefits—access to markets (with membership in 1973, Denmark gained free access to all its main European markets for the first time since 1930) and export restitution payments for its very substantial exports to third countries. It is now a matter of serious concern to Denmark that the efforts which are being made to control community expenditure, and especially CAP expenditure, are bound to have an adverse effect on Denmark.

EXPORTS
by Geographical Area

	1972	% share	1982	% share
EEC*	12,841	42.6	61,679	48.3
UK	5,884	19.5	17,945	14.0
W. Germany	3,706	12.3	22,203	17.4
France	851	2.8	7,033	5.5
Italy	1,121	3.7	6,357	5.0
Netherlands	736	2.4	4,409	3.4
Belgium/Lux.	403	1.3	2,322	1.8
Eire	136	0.4	622	0.5
Efta†	9,245	30.7	30,017	23.5
Sweden	4,726	15.7	13,872	10.8
Norway	2,149	7.1	8,282	6.5
E. Europe	1,086	3.6	2,084	1.6
U.S., Canada	2,709	9.0	8,346	6.5
Japan	258	0.8	2,056	1.6
Middle East/N. Africa	775	2.5	7,549	5.9

* The Nine. † Minus UK, Eire.

The Danes accept that CAP spending will have to be reduced, but they insist that the fundamental principles of the CAP — access to market, common prices, common financing—must be preserved. They will fight hard, too, for measures which do not penalise efficient farmers.

As Denmark receives about Kr 3bn — equal to about 10 per cent of agricultural export revenues — from the CAP, Denmark is one of the major beneficiaries of the EEC budget system, though its benefit has been reduced in recent years, partly through the budget rebates to the UK, partly through a narrowing of the gap between CAP and world market prices for agricultural products.

In the Danish current balance of payments account, the EEC item has declined from around Kr 4bn in 1978 to Kr 1.5bn last year.

For industry the benefits of EEC membership are not readily measurable, but as the EEC countries account for some 61 per cent of industrial exports, the significance of membership is obvious enough.

EEC membership has not brought with it any major shifts in the geographical distribution of Danish exports, however. The present member countries accounted in 1981 for about 46 per cent of total exports, compared with 43 per cent in 1972 (in 1982, mainly because the Japanese market was closed to Danish pigmeat after an outbreak in Denmark of foot and mouth disease, the share went up to 49 per cent). About 70 per cent (in 1982 79 per cent) of agricultural exports go to the EEC, also unchanged from 1972, but more now goes to the continental markets and the UK plays a less dominant role.

EXPORTS
By-product categories

	DKr m 1972	1982
Agriculture	8,222	31,031
Animal	5,387	20,587
Vegetable	822	4,445
Canned meat, powdered milk	2,022	5,999
Manufacturing:	19,766	85,867
Machinery, instruments	19,766	27,649
Chemicals	1,952	10,748
Metals, metal goods	1,175	6,124
Textiles, clothing	1,956	6,027
Fuel, lubricants	472	2,684
Furniture	724	3,923
Plastic goods	433	1,914
Beer, beverages	459	969
Ships	993	3,100
Other	5,117	63,138
Fish	1,310	5,057
Pelts	561	3,349
Other	27	1,418
Total	30,088	127,623

A wide belief that small is beautiful

Manufacturing industry

DEFINING the nature of Danish manufacturing industry is difficult. It is characterised by enormous complexity and diversity, a great number of small firms and only a few large ones: there are only about 83 firms with over 500 employees.

Some years ago, a study showed that if the size structure in Germany industry applied in Denmark, the number of firms would be halved.

The structure reflects the lack of indigenous raw materials, but this lack of industries based on domestic raw materials and the existence of relatively few large companies is not necessarily a disadvantage. Governments have never been tempted to nationalise industries, since it has never been clear that there are suitable targets for nationalisation. Nor have governments been tempted to provide direct subsidies to lame-duck industries or companies.

In this respect, Denmark is a model of the application of positive adjustment policies in the spirit of the OECD's recommendations. As Mr Holger Eriksen a senior official of the Industry Ministry, put it recently: "The aim is to enable industry to adjust to new and changing circumstances. Companies and industries which cannot manage to adjust have not been given artificial respiration."

Some of the country's more thoughtful industrialists believe that small will prove particularly beautiful as the world moves into the age of the micro revolution.

Mr Richard V. Reisted, who until recently was a board member of Jutland Telephone, one of Denmark's three (publicly-owned) telephone companies, is one of them.

"Denmark can become one of Europe's leading centres for programme development. What's more industry can achieve enormous competitive advantages for many products through the use of the personal computers," he said.

"The explanation for this is that the possibilities of the new technology stretch as far as the imagination can go, and in Denmark imagination goes further than in many other countries. We see this in the relatively large number of entrepreneurs we have compared with other countries. And adjustment to new conditions is easiest in small firms, of which we also have many."

This optimism assumes, of course, that the political conditions for industrial and entrepreneurial development will be favourable. Over the past few years, industrial policy may have been successful in encouraging positive adjustment, but macro-economic policy has succeeded less well in establishing the conditions for industrial growth, as the figures for employment in manufacturing indicate. It has fallen from a peak of about 410,000 in 1973 to about 350,000 today.

Since 1975, industrial production has increased by about 22 per cent. Textiles and clothing, paper and the graphical sector, non-metallic minerals, metalworks and shipyards have been the laggards, while the chemical industry, with a 36 per cent increase, metal-working and machinery (excluding shipyards), 32 per cent, and the wood-working and furniture sector and food processing, both about 27 per cent, have pulled ahead.

MANUFACTURING EMPLOYMENT & OUTPUT

	Persons employed (1,000s) June, 1983	Percentage change in output 1975-82
Extractive industry*	1.0	−19
Food processing	68.7	26
Textiles, clothing	28.9	7
Wood products, furniture	21.8	27
Paper, publishing	32.7	14
Chemical industry	34.2	36
Non-metallic minerals	17.1	−23
Metalworks	5.4	1
Engineering	139.5	32†
Shipbuilding	—	−11
Other	5.1	35
Total	355.8	20

* Excluding offshore oil industry.
† Excluding shipbuilding.

Strong position in insulin market

Drug Industry

THE DANISH pharmaceuticals industry has a higher per capita export, at $60 in 1980, than all but two other countries, Switzerland, $252, and Belgium, $67. Its export growth in the period since 1975 has increased by 247 per cent, outstripping every other Danish industry except furniture. Exports in 1982 were worth Kr 3.2bn, some 87 per cent of the industry's total sales, and this gave Denmark a trade surplus in pharmaceuticals of Kr 1.8bn.

There are nine Danish pharmaceutical exporting companies, but one of them, Novo, the insulin and enzymes manufacturer, stands out both by virtue of its size and its growth. Insulin, used to treat diabetes, accounts for 42 per cent of the country's pharmaceutical exports compared with only 14 per cent in 1970. As recently as 1977 it was still level-pegging with diuretica as the largest pharmaceutical export product.

Denmark's strong position in the insulin market is one of the many instances of an industry which has sprung up as a biproduct of the country's agricultural development, insulin being extracted from the pancreas of pigs. Novo began insulin extraction in 1925 and has remained one of the leading companies in insulin development.

In the 1950s it introduced a series of insulins which had a more sustained effect than earlier products and in 1973, it introduced its highly purified moncomponent insulins, which were a purer strain than anyone else's. Last year it became the first country in the world to market human insulin, which is insulin with a molecular structure identical to insulin produced in the human body. The Novo human insulin is produced by an enzyme-based modification of porcine insulin, not by genetic engineering, although the company has used genetic engineering for other purposes. Novo now claims 30 per cent of the non-Communist, world's insulin sales and 50 per cent of sales in West Europe.

Phenomenal growth

Novo's phenomenal recent growth—sales increased from Kr 938m in 1978 to Kr 2.71bn (about half from pharmaceuticals) last year and net income from Kr 75m to Kr 475m—would not have been possible, despite the company's brilliance in the fields of research and development, without the financial ingenuity it has shown.

Novo was the first Nordic company to break out of the straitjacket of domestic equity financing by exploiting the potential which a fast-growing company in a high technology business has for raising funds in international markets.

While the conventions of the Danish share market limit the issue price of new shares to 105 per cent, by raising equity capital in the UK and American markets, Novo has seen its share price increase from Kr 200 to Kr 2,300 and its issue of 400,000 B shares, in the form of American depositary shares, in the U.S. in April brought it Kr 942m, about 20 times as much as a similar issue in Denmark could have raised.

While Novo's position has naturally been built up in the European market, it has now begun to expand fast in the U.S. Although its products, according to Novo, lacked nothing in comparison with American insulins, the Danish Danish company did not have the marketing clout to make a real impact on the vast American market. But in 1982 Novo formed a joint company with E. R. Squibb and Co., with which Novo already had long-standing co-operation, to market and distribute Novo insulins in the U.S. Now, with the Novo product and Squibb's marketing and distribution facilities, the Danish company is making big inroads into the American market, claiming that its share of the market for insulin has risen from 5-7 per cent in 1981 to over 20 per cent today. At the end of August Novo was given permission to market its human insulin in the U.S.

About 80 per cent of Novo's insulin sales are of the highly purified monocomponent varieties. Human insulin represents a smal but growing share. The companies does not expect, and has never predicted, that the human insulins will show an explosive increase overnight, any more than the sales of monocomponent insulins grew explosively after introduction in 1973. But in the long run Novo sees the human insulin as the only form, and all that is in question is the speed of the change-over, which will depend on how fast consumers perceive the benefits of human insulin. So far, sales of human insulin have taken off fast in Ireland, where some 16 per cent of sales are now in human insulin, with a fairly high share in West Germany as well, but in the UK human insulin has so far only gained a "low single digit" share of the market.

Third in world

But Novo is not Denmark's only insulin manufacturer. Nordisk Insulin, with a turnover of about Kr 400m, four-fifths of it in insulin, is the world's third-largest insulin producer after Eli Lilly, the American company, and Novo. Technically, Nordisk is not far behind its larger competitors, either. It began marketing its own human insulin this year, just a year later than Novo. Nordisk will also begin to market this autumn an insulin pump, by which small amounts of insulin are released into the body almost continuously, in contrast to the normal proces sof injecting. Unlike other pumps already on the market, Nordisk's is refilled by charging with an insulin cartridge, not by using a hypodermic.

Good start to restoring economic health

CONTINUED FROM PREVIOUS PAGE

The Government's most radical budget proposal, breaking with a long tradition that social services should not cost the consumer anything, is to make the better-off fifth of the population (about a third of the working population) pay for visits to, and treatment by, general practitioners and part of the cost of a hospital stay.

The proposal is not dictated only by financial considerations. The Government is trying to make people aware that so-called free services are anything but free. Medical costs, according to the Government, should, for the categories of people concerned, be covered by insurance.

If the budget goes through, Government expenditure next year will rise by 3.4 per cent compared with an average over the past decade of around 14 per cent—and if the interest on the Government debt is excluded, spending will rise by only 1.5 per cent, which represents a decline of about 3 per cent in real terms. Government revenues will rise by over 11 per cent.

An improvement in the external account is clearly of crucial importance to the country's economic health. Having foresworn devaluation, however, and chosen instead to try to stabilise domestic costs, there will be no rapid increase in exports or in shares of export markets.

Export competitiveness may not even show any improvement this year, as, although wage inflation has slowed down, payroll taxes have risen, and wage costs will increase by about 8 per cent compared with 1982. In 1984 the situation will be rather similar, with wage costs rising by 6-7 per cent, slightly faster than wage rates. The OECD in fact predicts that Danish exports will suffer a loss of market share in 1984 of about 1 per cent.

There is, however, considerable disagreement among economists about the likely development of the economy next year, with the government and the OECD taking a rather pessimistic view of prospects and the Federation of Danish Industries in Copenhagen being far more optimistic.

The major differences on the demand side are that the Federation expects private consumption next year to rise by 1½ per cent while the government expects almost no change. The forecasters agree in predicting a three per cent volume increase in exports.

If the government and the OECD forecasts are right, unemployment will rise from an average of about 10 per this year to over 11 per cent in 1984, but there is some preliminary evidence that the Federation is on the right track. Industrial output has risen by about two per cent in the first half of this year and is still rising; there is some evidence of rising industrial investment; and, against all expectations, unemployment seems to be levelling out.

Whatever happens in the short term, however, the restoration of a more satisfactory equilibrium—on the external account, the budget and employment—will be a hard slog and take several years. All that can safely be said for the moment is that the government has made a good start.

DANISH EXPORTS III

The giant dock at Lindo operated by the Odense Steel Shipyard group

Survival by adaptability

Shipyards

DANISH SHIPYARDS have survived the past decade with fewer scars and fewer subsidies than shipbuilding in most European countries, which is not quite the paradox it may seem. In the absence of subsidies, they have had to improve efficiency to survive—and most of them have.

Nevertheless, the net has tightened round the shipyards this year. The Helsingaer Shipyard, a subsidiary of the J. Lauritzen shipping group, has had to close its new-buildings operations. A company formed by the employees is trying to scratch up orders to maintain jobs at the yard, which plays an important role in the economy of the town—better known as Elsinore—but so far without success.

The Nakskov yard, owned by the East Asiatic Company, was saved from a very difficult situation when the Government awarded it an order for two jumbo car-passenger ferries for use on Danish domestic routes, although Nakskov's price was considerably higher than the bids by other yards. The Government gave the order to Nakskov explicity for regional employment reasons, thus breaking with normal Danish practice.

It is not quite correct to say that the Danish yards do not receive subsidies, as they obtain financing on the Organisation for Economic Co-operation and Development recommended terms—8.5 per cent over eight years for up to 80 per cent of the price of a vessel—from the Ship Credit Fund. With domestic interest rates sometimes as high as 22 per cent, the subsidy element in this arrangement is considerable. But the yards do not gain any competitive advantage over international rivals from the Danish system.

Drop in labour

However relatively successful the Danish yards have been, they have not been able to prevent the labour force in the new-building divisions of the shipyards from falling from 15,900 in 1975 to 10,300 at the beginning of this year, and since then the numbers have fallen by over 2,000. The order books of the yards at the end of June were worth Kr 8.3bn, but almost no new orders have been taken so far this year. The major yards, Burmeister & Wain in Copenhagen, Odense steel shipyard, Aalborg Yard and Frederikshavn Shipyard, have orders to the beginning of 1985 or well into 1985, however.

The yards have shown great adaptability under the conditions of the past few years, turning their skills to building almost any kind of vessel from trawlers to luxury liners. Most of the yards have a very flexible building programme. The exception is Burmeister & Wain, which since the mid-1970s has specialised in building Panamax bulk carriers of about 62,000 dwt. It has used serial production of the vessels to bring its productivity to a level which begins to rival the productivity of the Japanese yards, but its main selling point has been the energy-saving characteristics of the diesel engines with which the ships are fitted. They are produced by Burmeister & Wain Motor Works in Copenhagen, which are now owned by MAN. They have enabled B & W vessels to reduce oil consumption from about 50 tonnes a day at normal cruising speed to 33 tonnes. The B & W shipyard made Kr 89m in 1982 and expects to improve on this in 1983.

The yard which has the reputation of being the most modern is the Odense Steel Shipyard, a subsidiary of the A. P. Moller shipping group. In the 1960s and early 1970s, it turned out some of the biggest supertankers delivered by European yards. Since then it has turned its hand to almost everything from container vessels for the parent company to flat-top barges and residential modules for platforms for the offshore industry.

The change-over has not gone entirely smoothly. It was losing money at the end of the 1970s, when it was taken in hand by Mr Troels Dilling, a former captain in the A. P. Moller fleet. It made net profits of Kr 22m in 1981 and Kr 57m last year and Mr Dilling's ambition is to make the yard as efficient as the Japanese yards within the next one to two years. His staff do not doubt that the bluff ex-captain means what he says or that he will achieve his target.

Productivity

The whole yard has been harnessed to the campaign to improve productivity. There are 24 work groups, with representatives from the shop-floor to senior management, seeking ways of bettering work routines and there is a substantial investment programme to back them up. Computer aided design and manufacturing (CAD/CAM) techniques and computerised control of components (up to 60,000 may go into a single ship) are being used to speed up production times.

One of the benefits of these techniques is that they reduce the gains from serial production, known in shipyards as the sister ship effect. Computerisation makes the yard a specialist builder of every vessel it undertakes to build. Some of these techniques are being tried out for the first time on a series of Upton Class container vessels for A. P. Moller.

Sector where design pays off

Electronics

DENMARK'S MANY small electronics companes excel in gaining a market niche for a product which is too specialised and for which the market too limited to attract the attention of the multinational giants.

The smallness of the Danish firms has not been a noticeable disadvantage, judging by the industry's export record. The DKr 6.6bn exports of electronic products in 1982 represented a per capita export matched only by Belgium and Sweden, according to Mr Frede Ask, of the Electronic Industry Manufacturer's Association.

The export figure (which includes some re-exports) amounts to 89 per cent of the value of production, but because there is almost no domestic production of products which can be mass-produced, there is also a trade deficit in electronics, with imports totalling about DKr 7.7bn last year. The main item in the deficit is electronic calculators and computers, of which Denmark produces to a value of only DKr 387m and imports for DKr 2.5bn.

Sharp rise in value

Out of a total production valued last year at DKr 7.3bn, professional electronics accounted for DKr 4.78bn and production value has increased by about 190 per cent since 1975, while consumer electronics sales were DKr 1.5bn and have increased by 120 per cent; the balance is made up of components, of which sales have increased by about 100 per cent since 1975.

Consumer electronics is almost identical with Bang and Olufsen, the Jutland manufacturer of colour television sets and hi-fi and stereo equipment, which has clung to a place in a market dominated by the mass-producers by supplementing its skills in electronics with outstanding industrial design.

The combination of technical and design standards has attracted an up-market clientele which is not too price-sensitive. B and O is currently in an expansive mood, launching into a substantial investment programme for the production of new equipment this year. Its turnover last year was Kr 1.3bn and net earnings were Kr 30m.

The biggest single production and export category in the professional products group is measuring instruments, including medical electronics. Close co-operation with the Danish hospitals and health service has provided a strong background for the development of a wide range of instruments which have been tested and developed in the local hospitals before being launched on export markets.

Pre-delivery check on one of NKT's 34 Mbits/s optical transmitter receiver units

Some of the largest electronics producers, all with turnover in the Kr 500m range, such as Bruel and Kjaer, Radiometer and DISA, have built up much of their electronics production around the medical sector. Three Danish hearing aid manufacturers, with combined exports in the region of Kr 400m, have for many years had a 25 per cent share of the world market for hearing aids, a position the Danes were helped to achieve by the fact that the Danish health service, over 30 years ago, was one of the first to provide the deaf with free hearing aids.

Paradoxically, in view of Denmark's near-total dependence on imported computers, the fastest growing of the larger electronics companies is in the computer field. Christian Rovsing's sales have increased by 40 per cent or more in each of the past five years to reach Kr 414m in 1982. Using its own computers, Rovsing has won a series of major international orders against competition from the international giants, among the more recent being booking and reservation systems for Air Canada last year and a Kr 258m order for a similar system for American Airlines announced earlier this month.

In the coming information technology revolution the Danes, while unable to compete in the larger capital investment items, are ideally placed by virtue of their smallness and adaptability to carve out product niches for themselves in ancillary and peripheral products and customer-specific systems solutions.

Several companies are already well-established in the telephone and mobile communications business, GKN Automatic (one of the stable of electrotechnical companies in the Great Northern Telegraph group) and Jutland Telecom International, a subsidiary of Jutland Telephone, one of the three publicly-owned telephone companies, have exploited the demand for sophisticated coin boxes and "intelligent" phones, while Storno (now a subsidiary of General Electric of the U.S.), and two or three other Danish firms have a strong position in mobile communications systems.

Ambitious plan

The Danes have an ambitious plan to construct a broad band national communications network, an integrated system capable of carrying video signal as well as data and telecommunications signals over the same network. If the Government, as expected, pushes through the necessary legislation this autumn, construction of the first stages of the Danish broad band net can begin next year and on present planning assumptions the Danes could well be the first in Europe with a completed broad band net.

The Danish system will start out as what is known as a hybrid system, which means that for the main trunk line communications it will use optical fibre and for local hook-ups it will use existing coaxial, copper cable.

The advanced state of planning in Denmark contains both risks and potential advantages. If the operation is a success, the Danish companies involved (and because the development work for the Danish system has all been done by Danish companies in co-operation with the telephone companies and technical universities, no foreign firms are involved) will be well-placed to develop an export business.

The leading Danish manufacturer in this field is NKT Elektronik, a division of Nordisk Kabel og Traadvarefabrik, which has developed an optical fibre manufacturing capacity and a full range of equipment for the optical digitalised transmission of video, voice and data signals. NKT's systems have been developed in co-operation with Jutland Telephone, one of the three telephone companies.

Unlike the typical Danish electronics company, NKT Elektronik is going in for a complete system, divisional managing director Ole Steen Andersen points out. "The market is still too thin for specialisation, so we are making a broad-based effort. There is an enormous interest in us from foreign companies which are much bigger and ought to be ahead of us, but are not," he said.

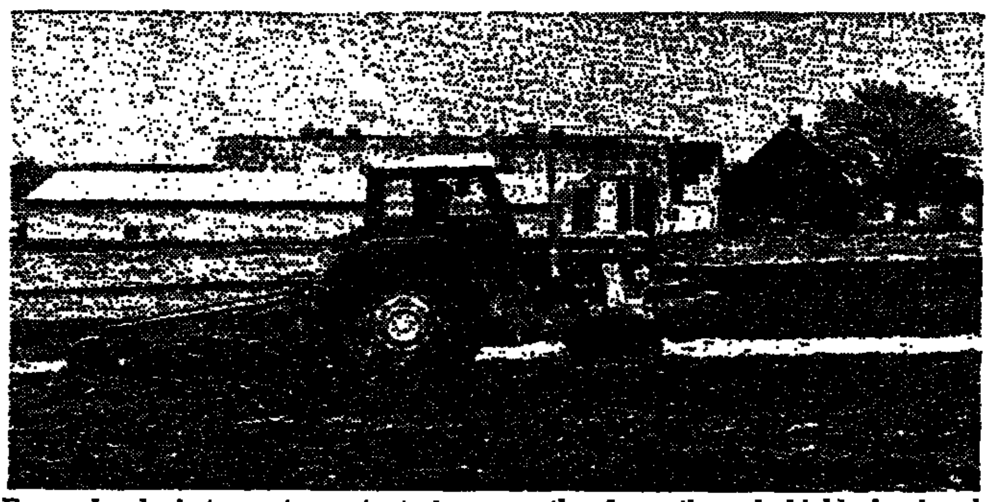
He claims that as a small company (the NKT group turnover is about Kr 1.5bn and NKT Elektroniks a tiny Kr 65m) NKT has been able to take decisions quickly and achieve solutions faster and with fewer resources than its giant competitors.

Apart from its Danish references, NKT has taken several interesting export orders which help to substantiate its claims to being one of the leaders in this field. In 1982 it won, together with Jutland Telecom International, a contract to supply an optical fibre-based communications system to Kuwait against competition from 14 foreign companies.

It also won a contract in Zurich for a six kilometre optical cable system and an order from British Telecom for optical transmission equipment. NKT is particularly pleased with having obtained a foothold in the difficult British telecommunications market.

Two big sellers: farm produce and food processing know-how

Higher output from fewer farms



Fewer hands but greater output down on the farm through highly-developed specialisation and mechanisation

Agriculture

MODERN DENMARK is in important respects a product of its success, starting a century ago, as an agricultural exporting nation. Until the end of the 1950s agricultural exports accounted for almost two thirds of total merchandise exports, and, although today the share of the population working in agriculture has fallen to six per cent, agriculture has maintained a remarkably high share of exports. Since Denmark joined the EEC in 1973 this share has in fact stabilised at around 28 per cent.

This figure includes canned meat and powdered milk exports, worth about Kr 6bn last year. If one includes a variety of other processed food products, such as beer, aquavit, biscuits and sugar the agricultural share of exports rises to well over a third.

Despite the obvious advantages to agriculture of EEC membership, life has been anything but easy for the farmers over the past few years. In 1979 they were caught in a classic cash squeeze. CAP prices did not increase as fast as earlier, soaring Danish interest rates cut into their profits, and, as property prices fell sharply, they had no security against which to borrow money to tide them over. Over 3,000 farms have been foreclosed since the end of 1980.

In 1982, to make matters worse, an outbreak of foot and mouth disease closed American, Japanese and several other overseas markets to Danish meat products, causing substantial but unquantifiable losses. The Japanese market, to which in 1981 the Danes exported 81,000 tonnes of pigmeat, or more than 10 per cent of total pigmeat exports, was opened to the Danes again on September 1, but they face a difficult task in regaining their share of the Japanese market.

Somewhat surprisingly, the financial crisis did not affect agricultural production, which underwent a rapid concentration on fewer farms. About 20 per cent of the 107,000 farms now account for 80 per cent of production. The labour-demanding dairy herd has declined by about 1 per cent to 1.01m milking cows over the past four years, but milk production increased in the same period by 4 per cent to 5.0m tonnes. The number of pigs delivered to slaughterhouses has risen steadily from about 11m in 1977 to over 14m last year.

The market structure of Danish agricultural export has, however, changed considerably over the past decade. The British market for butter and bacon, and the American market for canned hams, used to dominate exports.

The UK used to account for about 80 per cent of Danish butter exports. It now takes about 50 per cent. Much of the rest goes to expanding markets in the Middle East, Iran, Saudi Arabia and Kuwait. In 1970 the UK accounted for 60 per cent of total pigmeat exports and the UK bacon market for 47 per cent. The UK now accounts for 42 per cent of total exports and bacon exports for only 26 per cent.

Butter exports, 76,000 tonnes last year, have also slipped to second place as a dairy export, and given place to cheese, with exports up from 75,000 tonnes in 1972 to 194,000 in 1982. This is not least because the Danes discovered a technique for making feta cheese from cows milk (feta is a staple form of cheese in the Near and Middle East and is traditionally made from sheep's milk).

The Danish exporters rapidly established a substantial market in Iran, which survived the overthrow of the Shah. Iran last year was Denmark's most important market for cheese, taking 56,200 tonnes compared with 21,000 tonnes to the UK and 32,000 to Germany.

The decline of the British bacon market, owing to a fall in per capita consumption of bacon —the Danish share of the market at 42-43 per cent has remained stable—has forced the Danes to seek new markets and new products. Japan is (or was) a major market for tenderloin and middles; the U.S., which 10 years ago was exclusively a market for canned hams, became an important market for spare ribs.

The pigmeat export business is currently rent by a schism between the 16 slaughterhouses which are members of the ESS-Food, the meat export marketing association. ESS-Food disposed of 63 per cent of all pigs slaughtered in 1982 and it has a monopoly for the export to the UK of all cuts of over three kilograms, in effect a monopoly of bacon exports. Five of the 16 slaughterhouses, accounting for about a third of pigmeat production, have decided to withdraw from ESS-Food at the New Year.

If the breach leads to price competition, especially in the UK bacon market, between the two groups, the revenue losses could be serious, but it seems likely that the two groups will agree on a joint price quotation for bacon in the UK. Another concern, perhaps of even greater significance in the long run, is the the quality control which has asured a uniform and high quality meat, will be affected by the schism.

As it is the quality reputation of Danish pigmeat, rather than the strong marketing position of ESS-Food, that has enabled Danish pigmeat to sell at premium prices over products from competing countries, any slackening of quality control standards could have very serious consequences.

ECONOMIC FORECASTS

Demand and output

	DKr (bn) (current prices) 1982	Percentage change in volume 1981	1982	1983	1984
Consumption	393.9	0.2	2.8	1.5	1.5
private	262.3	−1.2	2.6	1.5	2.0
public	131.6	3.0	3.3	1.5	1.0
Gross fixed investments	76.2	−15.6	3.7	2.0	1.0
residential construction	16.4	−24.6	−12.1	7.0	13.0
energy-sector etc*	15.2	34.0	50.0	1.0	−20.0
other private business	32.3	−18.5	1.0	5.0	8.0
public	12.3	−18.9	−7.5	−10.0	−5.0
Final domestic demand	470.0	−2.3	3.0	1.5	1.5
Change in stockbuilding	−0.1	0.2†	0.2†	0.0†	0.0†
Total domestic demand	469.9	−2.1	3.3	1.5	1.5
Exports of goods and services	166.2	6.8	2.0	2.0	3.0
Goods	129.8	4.7	2.0	2.0	3.0
Imports of goods and services	166.4	−1.7	3.0	0.5	2.0
Goods	140.7	−2.0	2.1	0.0	2.5
GDP at market prices	469.8	0.2	3.1	2.5	2.5
Industrial production		0.2	2.3	2.5	3.5
Industrial investment		−13.9	−5.0	4.0	9.0
Consumer prices		11.7	10.1	6.0	4.0
Export prices		14.0	10.5	5.0	4.0
Import prices		17.0	10.3	2.5	3.5
Trade balance (fob/cif)		−10.4	−10.8	−4.5	−2.0
Current balance DKr (bn)		−12.5	−18.7	−13.5	−11.5
Unemployment‡		9.2	9.5	10.0	10.0

* Incl. investments in the energy-sector.
† Change as percentage of GDP previous year.
‡ Registered unemployment as percentage of total labour force.

Big success for dairy plants

Today's dairy in Denmark is highly automated and the technology is a big seller abroad

Agro-technical

AGRO-TECHNICAL exports are a fast-growing export business for the Danes. Mr Kjeld Ejler, the managing director of the Agricultural Council (the umbrella organisation for all the Danish farmers' organisations) estimates that agro-technical exports have risen from about Kr 5bn in 1978 to about Kr 12-13bn currently.

The growth, said Mr Ejler, has both internal and external causes. External factors include the encouragement being given by international development banks and agencies to rural development and the interest which the oil-producing developing countries have in reducing dependence on imported food.

Internally, the slump in the domestic building and construction industry in the mid-1970s caused architects and civil engineers to turn their attention to the opportunities in export markets.

The high standards in Danish agriculture and food processing, and the machinery and equipment manufacturers which supply them, have provided a fertile background for the development of agro-technical exports.

The biggest single project undertaken by the Danes is still under construction in Libya by a consortium of three companies, Atlas (abbatoir equipment), civil engineering contractors Højgaard & Schulz and Danish Turnkey Dairies. When completed next year the combined poultry, meat and dairy project will produce 5.5m broilers a year and operate a dairy complex using milk from 600 milking cows and with a total herd of 1,500 cattle.

Sugar producer

Some of the major forces in the agro-technical sector are the companies in De Danske Sukkerfabrikker (DDS) group, which with a turnover in excess of Kr 7bn is one of the country's largest industrial enterprises. The parent company is a monopoly sugar producer with an innovative reputation and blue-chip finances. Round it the company has gathered a series of subsidiaries, most of them with some relation to the food-processing industry, such as Niro Atomizer in dry spraying equipment, DDS-Kroyer in sugar-making technology, Pasilac for dairy equipment and Danish Turnkey Dairies (DTD).

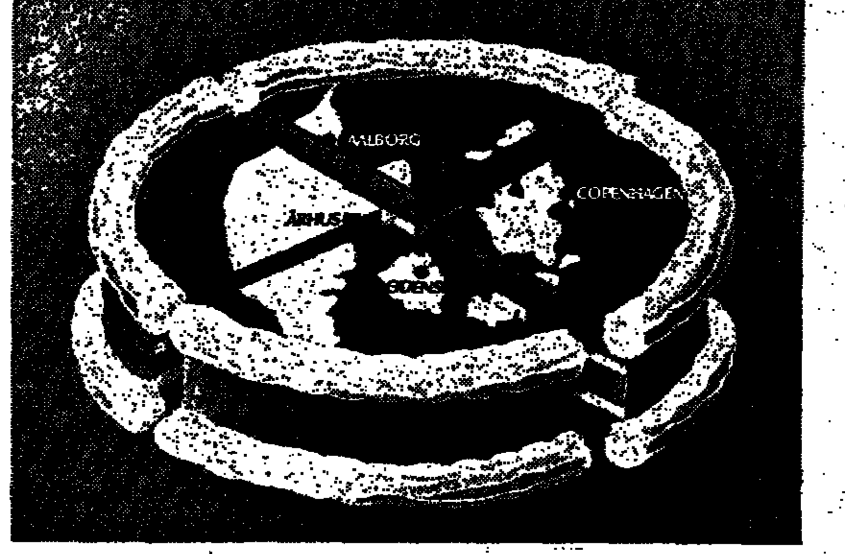
DTD was founded in 1969 and became a member of the DDS group in 1977, since when it has expanded fast. It now has a staff of about 550 and a turnover of about Kr 1bn. When it was founded its target was to become the world's leading supplier of turnkey dairies. Having completed 200 projects in 32 countries in five continents, it claims to have achieved its goal.

The business concept behind DTD's success was developed by its founder and managing director Jorn B. Jensen. The idea is to enable the buyer to enjoy a one-to-one relationship with the supplier, who takes complete responsibility for delivering the completed plant, thus releasing the buyer from the need to sign hundreds of supplier contracts. "We claim that by using the turnkey alternative, the buyer is able to obtain his dairy about 15 per cent cheaper than by traditional methods of contracting," said Holger Christensen, executive vice president.

DTD's first contracts were made with Kenya, where it has supplied five dairies. It has also been successful in the Middle East. About 90 per cent of milk in Saudi Arabia comes from DTD dairies and last year DTD delivered one of the world's largest recombinant (in which the finished products are made by the reconstitution of milk powder) dairy plants to Kuwait, for the Kuwait Danish Dairy Company, which processes 450,000 litres of milk a day and produces a full range of dairy products.

More recently DTD has branched out into turnkey plants for a wide range of other food processes. Subsidiaries Intercool and Interfish supply meat and fish processing plant (as well as vegetable collection and distribution plant) and through Beverage Technic International, DTD has moved into the supply of non-milk beverage and yeast fermentation plants.

DTD and other dairy industry companies are pinning hopes on the development of the Chinese dairy industry. DTD and three other companies were awarded the contract on a consultancy basis to work out a "Masterplan 2000" for the development of dairying in China with the ambitious, probably over-ambitious, target of increasing milk consumption from its present very low level to a quarter of a litre per head per day by 2000. At DTD they say that China tends to choose suppliers from one country only when it seeks assistance for the development of a given industrial sector. They are hoping that Denmark will be chosen in dairying. DTD has already supplied two plants to China, a milk powder factory and a yoghurt factory, both of them items in the master plan.



TECHNOLOGY

EDITED BY ALAN CANE

POWER OF THE COMPUTER USED ON-SCREEN TO INCREASE PRODUCTIVITY

Computervision's design for success

BY GEOFFREY CHARLISH

COMPUTERVISION, WHICH since its foundation 12 years ago has raised its revenues from zero to $325m and now employs 5,000 people, fielded president and chief executive officer James Berrett in London recently to outline the company's clearly aggressive plans in the integration of computer aided design, manufacturing and engineering (CAD/CAM/CAE).

These are important new areas in industry in which the power of the computer is used "on screen" to increase productivity not just of drawing production (CAD), but also in the extension of this basic data into the related engineering problems such as kinematics, stress, thermal properties (CAE), and to the production of data that can be fed straight to manufacturing processes (CAM). The amalgamation of them all is now generally being referred to as computer integrated manufacturing, CIM.

Claiming to sell more of these systems than all its competitors put together, the company has, since the summer, acquired Cambridge Interactive Systems in the UK, Grado in Germany and the Organisation for Industrial Research (OIR) in Massachusetts. It has also completed important technology agreements with Sun Microsystems in California and in August it signed agreements with IBM.

The moves are all for specific reasons. "We signed with IBM to obtain its relational database technology," said Berrett—a reference to IBM's high level of ability in constructing stores of information in which the various parts and aspects always correspond automatically. For example, in car design, a change in engine power rating might automatically increase the size of the brake shoes.

In addition, however, Computervision will also be buying considerable numbers of IBM 4361 and 4381 machines—for database processing—in what amounts to the first major OEM agreement that the computer giant has ever entered into.

Sun on the other hand, can provide specific knowhow about electronic engineers' workstations, while the OIR has a background in group technology (the technique of identifying like components in design and manufacture in an effort to prevent the re-invention of the wheel). CIS and Grado will be contributing in terms of application software for single user, networked CIM environments.

All this activity is aimed at the integration of design, engineering and manufacture, ultimately embracing such aspects as materials control and handling and in due course feeding the necessary data into a company's corporate and financial computers as well.

For the moment, Computervision is concentrating on allowing designers to "down line load" information into certain "manufacturing point technologies"—such things as computer controlled machining and robot assembly. In U.S. aerospace companies some of these things are already in place.

The company's "core" product for these developments is the recently introduced CDS4000 which is based on a 32 bit processor and one or more interactive processing units, giving fast and flexible handling of both graphics and non-graphics data.

Up to 26 users, 16 of them on graphics terminals, can use the system at the same time, working on totally different jobs. There are also large-scale analytical abilities that allow the deployment of third party engineering packages such as finite element analysis or pipe layout programs.

With the new agreements, Computervision sees its future activity in terms of three tiers: workstations, the CDS4000 core, and the IBM data management tier. "But they will all play together," says Berrett, "and the user won't have to worry about it.

"We see ourselves as system integrators," continued Berrett, "because people want to acquire items from various sources and put them together. It's a big software problem."

Berrett is convinced that already the engineering workstation user wants to combine access to design information with other tools. For example, he might want access from his terminal to cost data, allowing selection of the most cost-effective part or material for the job. Or he might want to use an office automation facility like word processing to prepare specifications or to write reports.

In many cases, his activities will generate conceptual design information which will be used at a later stage in the product design and manufacturing process.

James Berrett: signing deals to position the company for the integrated factory market

For example, an electronics engineer might use his engineering workstation to complete a logic design and then pass that information through a communications network to another system where the printed board layout will be completed.

"Hence our recent agreement with Sun Microsystems," says Berrett, "which will provide the technology platform for a new series of engineer's work stations that can be networked together.

One problem, says the Computervision CEO, "is that the sheer volume of information being generated is staggering. So there is a major market opportunity to provide expanded systems that can store, manage, control and communicate the data generated by core products such as the CDS4000."

Already there is often more data in such a database than there is in a company's corporate/financial system.

Another important element in the new Computervision approach is data communication—the ability to transmit all this information from facility to facility, from one department to another, and the ability to integrate the engineering and manufacturing information within the larger context of corporate information systems.

Berrett believes that this new function—the ability to manage design and manufacturing information—must exist in addition to, not instead of, the core capability, which is for creating design and manufacturing information.

And that, basically, is why Computervision has in the last few months engineered relationships with five other organisations, including IBM.

It is a big and growing arena: more than $1bn of systems are being sold annually and Computervision's installed base alone exceeds $1.2bn.

"FLYING EYEBALLS" LOOK FOR GROWTH AHEAD

Why the Government is anxious to develop remote sensing skills

BY ELAINE WILLIAMS

"OUR OBJECTIVE is really to put ourselves out of business," says Graham Davison, who runs the National Remote Sensing Centre based at RAE Farnborough in Hampshire.

His group has the job of helping transferring its expertise in remote sensing satellite technology to industry.

Set up in 1980, the aim of the centre is to encourage industry to develop an interest in remote sensing data from satellites. These satellites—often nicknamed flying eyeballs—carry sensitive instruments which scan the surface of the earth. Data transmitted to earth can give clues towards the whereabout of mineral deposits, help monitor growing crops, track large fish shoals and detect oil slicks.

The Government is anxious that Britain develops expertise in interpreting remote sensing data and announced a national strategy earlier this year to encourage companies to enter the market which could be worth as much as £250m by the end of the decade. The National Remote Sensing Centre operating through the Space and New Concepts Department is playing an important role by introducing companies to the potential of the technology.

Mike Hammond, who is in charge of promoting commercial business at the centre, said that there are 80 to 100 companies in the UK with some sort of interest in remote sensing though only about 12 are actively involved in the technology.

The centre is funded by several organisations including the Department of Industry, Natural Environment Research Council, Overseas Development Administration, Department of Environment, Ministry of Agriculture, Fisheries and Food, and the Scottish Development Department. Funds are £450,000 this year and the centre had revenues of about £250,000 from its commercial work. In addition, the centre is administered by a board which is made up of representatives from the funding organisations and observers from the Royal Society, the Science and Engineering Research Council and the Remote Sensing Society.

The centre has access to data from several satellites. These include the polar orbitting NOAA series of weather satellites which are used by the National Oceanic and Atmospheric Administration and operated by NASA in the U.S.; GEOS(E), Meteosat, and Landsat.

There are two satellite ground stations in the UK which are suitable for receiving signals from remote sensing satellites. One is at RAE Oakhanger and the other at RAE Lasham. Lasham takes data from the NOAA and GEOS(E) satellites while Oakhanger was involved with the Seasat satellite, one of the first to be equipped with microwave sensors, which was launched in 1978 but only lasted for 100 days before failing.

However it is the Landsat which is of the greatest interest to UK users but this is not directly received through UK satellite ground stations. Instead, the Farnborough centre receives the information via Earthnet, the European network which provides a network for the acquisition, archiving processing and distribution of remote sensing satellite data. Two receiving stations are situated at Fucino in Italy and Kiruna in northern Sweden.

Most data of interest to the UK comes from Kiruna in the form of magnetic computer tapes. The Landsat spacecraft—now up to number four in the series—contains an instrument called a multispectral scanner. This has a mirror which reflects incident radiation from the earth on to four sensors which operate in different spectral bands.

Two of these are in the optical part ofthe spectrum and two in the near infra-red. The Landsat satellites are in 900km circular orbits around the earth and cut a swath 185km wide. Each image that is transmitted in the form of digital signals is made up of a series of picture elements corresponding to an area of 79m by 56m. Once every 18 days the satellite returns to the same spot over the earth.

Farnborough's job is to turn this data into images which can be analysed. To do so, the space department has two Prime 750 computers which are dedicated to remote sensing work. One is used for general purpose image processing and the other is used to produce large contour plots.

Mr Hammond said that Farnborough is not the only place where satellite data can be analysed. The national College of Agricultural Engineering at Silsoe runs a regional centre capable of data analysis. The Remote Sensing Centre would also like to set up other regional centres throughout the country either run as an outpost of the Farnborough centre or operated by independent companies. The first independent company called Ersac has just started operation in Livingston in Scotland.

The centre was interested in one glacier off the west coast of Greenland which alone is responsible for 11 per cent of the world's icebergs

Some of the applications in which the centre has been involved include a study to monitor icebergs from their formation when they are chipped off glaciers and start the slow journey out to sea. The centre was particularly interested in one glacier off the west coast of Greenland which alone is responsible for 11 per cent of the world's icebergs.

These icebergs end up off the Canadian coast where oil platforms are located. Satellites could help track these moving ice mountains to ensure that they are not threatening the oil rigs. It is possible to tow the icebergs so that they change course.

Other work at the centre has involved charting of sand banks in river estuaries which is important for heavily trafficked rivers and charting plankton which indicates fish feeding grounds.

The centre also carried out a feasibility study on the possibility of using satellites for woodland inventory for the Forestry Commission. Apparently 1947 was the last time a full survey of the country was carried out. The Isle of Wight was used as the test site to prove the accuracy of the method.

More than half the centre's work relates to mineral exploration. Here the centre can enhance satellite images to highlight certain features on the Earth so that experienced geologists in private companies can interpret the data. Mr Davison emphasises the fact that satellite data is just another tool in the hunt for minerals.

"Remote sensing was oversold in the early days. People are adopting a more realistic approach to the value of the data," Mr Davison said.

He said that there was still a need for basic research in the interpretation of satellite data. Optical sensors which have been around for a decade or more have been joined by microwave sensors but these require different analysis methods. The advantage of microwave sensors is that they can operate in all weather conditions whereas optical sensors cannot penetrate cloud cover.

The way in which objects emit, reflect or absorb electromagnetic radiation is unique so that it is possible to establish the characteristic of surfaces. However, much work is still needed to accurately turn satellite signals into images which mean something useful.

One group at RAE Farnborough is building up expertise in the new microwave sensors but Davison believes that it will be at least a decade before the work pays off. "We are making an investment in the future," he said. This is because microwave sensors are still relatively new and few satellites use them.

For example, the European Space Agency plans to launch a series of remote sensing satellites beginning in 1987. The first craft, ERS1, will be an oceanographic satellite for ocean study. It will have microwave sensing in the form of synthetic aperture radar. This trasmits a signal from the satellite to the ground and detects the radiation that is scattered from the surface back to the receiver.

CONTRACTS AND TENDERS

Perusahaan Umum Listrik Negara
Agency of the
Ministry of Mines and Energy of the
Government of the Republic of Indonesia
INVITATION TO TENDER

Tenders for the generator transformer and unit transformer for the new 2 x 400 MW Suralaya Steam Power Plant Units 3 and 4 as the extension of Suralaya Steam Power Plant Units 1 and 2 currently under construction near the town of Merak in West Java will be received at or before 10.00 hours on January 30, 1984, for public opening at 11.00 hours on the same date at the head office of Perusahaan Umum Listrik Negara, Jalan Trunojoyo Blok MI/135, Kebayoran Baru, Jakarta Selatan, Indonesia.

The complete tender for Unit-3 comprises the design, manufacture, supply, installation and commissioning of equipment including the following:

— *One 470 MVA 500 kV generator transformer*
— *One 46 MVA unit service transformer*
— *500 kV equipment and overhead connections of Unit-3 to existing 500 kV substation*
— *Low voltage power and control cables*

The portion for Unit-4 which comprises of similar scope, is to be tendered as an option.

Beginning October 24, 1983, the tender documents may be examined and collected personally by prospective tenderers or by their authorised representative in Jakarta upon cash payment of the non-refundable amount of Indonesian Rupiah 500,000 at the following address:

Perusahaan Umum Listrik Negara
Directorate of Planning
Jalan Trunojoyo Blok M I/135
Kebayoran Baru, Jakarta Selatan
Indonesia

Each set of documents will include two (2) copies of the complete tender documents.

To qualify for an award, tenderers (individual suppliers or a consortium) must demonstrate that they have designed, manufactured, delivered, installed and commissioned during the preceding ten years, at least two contracts each having major equipment of equal or larger nominal rating than that specified. Each installation shall have been in successful commercial operation for a minimum of three years.

Tenders will be received from qualified tenderers or their authorised representatives.

Perusahaan Umum Listrik Negara has obtained a loan from the International Bank for Reconstruction and Development for Unit-3, and has applied for a loan for Unit-4, and will apply the proceeds of these loans for payment under this contract. Only tenderers/manufacturers from member countries of the International Bank for Reconstruction and Development and Switzerland and Taiwan are eligible to tender.

Perusahaan Umum Listrik Negara reserves the right to reject any or all tenders and may waive minor irregularities and informatilities.

Jakarta, October 1983
Perusahaan Umum Listrik Negara

Perusahaan Umum Listrik Negara
Agency of the
Ministry of Mines and Energy
of The Government
of the Republic of Indonesia
INVITATION TO TENDER

Tenders for the Ash and Dust Handling Plant contract for Suralaya Steam Power Plant Units 3 and 4 as the extension of Suralaya Steam Power Plant Units 1 and 2 currently under construction near the town of Merak in West Java will be received at or before 10.00 hours on January 23, 1984, for public opening at 11.00 hours on the same date at the Head Office of Perusahaan Umum Listrik Negara, Jalan Trunojoyo Blok M I/135, Kebayoran Baru, Jakarta Selatan, Indonesia.

The complete tender comprises the design, manufacture, supply, erection and commissioning of plant of 500,000 tonnes per annum capacity, to receive and transfer ash and dust from the steam generators to the existing ash and dust handling system.

Furnace bottom ash from the steam generators will be removed by submerged scraper conveyor. Fly ash from the precipitator hopper will be removed by pneumatic gravity conveyor. Furnace bottom ash and fly ash are then transferred to the existing ash and dust handling system by belt conveyor.

The equipment to be supplied is to include ash and dust handling plant for Unit-3 and option for Unit-4. Contract award will be on the basis of the lowest responsive evaluated tender for Unit-3 plus the option for Unit-4.

Beginning October 17, 1983, the tender documents may be examined and collected personally by prospective tenderers or by their authorised representative in Jakarta upon cash payment of the non-refundable amount of Indonesian Rupiah 500,000 at the following address:

Perusahaan Umum Listrik Negara
Directorate of Planning
Jalan Trunojoyo Blok MI/135
Kebayoran Baru, Jakarta Selatan
Indonesia

To qualify for award, tenderers must demonstrate that they have successfully designed, manufactured, erected and commissioned a minimum of two comprehensive ash and dust handling plants of equal or greater capacity than that specified during the preceding ten years, which have been in successful commercial operation for a minimum of three years.

Tenders will be received from qualified tenderers or their authorised representatives.

Perusahaan Umum Listrik Negara has obtained for Unit-3 and applied for, for Unit-4, loans from the International Bank for Reconstruction and Development and will apply the proceed of these loans for payment under this contract.

Only tenderers/manufacturers residing in member countries of the International Bank for Reconstruction and Development and Switzerland and Taiwan are eligible to tender.

Perusahaan Umum Listrik Negara reserves the right to reject any or all tenders and may waive minor irregularities and informalities.

Jakarta, October 10, 1983
Perusahaan Umum Listrik Negara

REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE

(Algerian Popular Democratic Republic)

MINISTERE DE L'ENERGIE ET DES INDUSTRIES PETROCHIMIQUES

(Ministry for Energy and Petrochemical Industries)

ENTREPRISE NATIONALE DES TRAVAUX AUX PUITS

(National Oil Exploitation Company)

NOTICE OF INTERNATIONAL CALL FOR TENDERS NUMBER 9049/DIV

The Entreprise Nationale des Travaux aux Puits (National Oil Exploitation Company) is launching an International Call for Tenders for the supply of:

Item No. 1 — "GIRAFFE" 10-tonne workshop crane (equipment for engineering workshop)
Item No. 2 — Lawn mower
Item No. 3 — Woodwork equipment and materials

This Call for Tenders is intended for manufacturing companies only and excludes amalgamations, representatives of companies and any other intermediaries, in conformity with the provisions of Law No. 78-02 of 11 February 1978, with respect to State Monopoly on Foreign Trade.

Tenderers interested in this call for tenders may obtain the specifications from the following address:

Entreprise Nationale des Travaux aux Puits, 2 Rue du Capitaine Azzoug, Cote-Rouge, Hussein-Dey, Alger (Algiers), Algeria — Departement Approvisionnements et Transports (Supplies and Transport Department) — with effect from the date on which this Notice is published.

Offers, of which five (5) copies should be prepared, must be sent in a double sealed envelope, by registered post, to the "Secretariat du DAT" (Secretariat of the Supplies and Transport Department) at the above address, the outer envelope being completely anonymous, bearing no company insignia, and stating simply "APPEL D'OFFRES INTERNATIONAL Numero 9049/DIV — Confidentiel — A ne pas ouvrir" (INTERNATIONAL CALL FOR TENDERS No. 9049/DIV — Confidential — Do not open).

Tenders should be sent to arrive by 12.00 hours on Saturday, 26 November 1983, at the very latest.

Selection will be made within 180 days from the closing date of this Call for Tenders.

REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE

(Algerian Popular Democratic Republic)

MINISTERE DE L'ENERGIE ET DES INDUSTRIES PETROCHIMIQUES

(Ministry for Energy and Petrochemical Industries)

ENTREPRISE NATIONALE DES TRAVAUX AUX PUITS

(National Oil Exploitation Company)

NOTICE OF INTERNATIONAL CALL FOR TENDERS NUMBER 1601-1M/DIV

The Entreprise Nationale des Travaux aux Puits (National Oil Exploitation Company) is launching an International Call for Tenders for the supply of:

Item No. 1 — Hand tap and die
Item No. 2 — Hand tap and die (metric ISO)
Item No. 3 — Mortising tool and drills

This Call for Tenders is intended for manufacturing companies only and excludes amalgamations, representatives of companies and any other intermediaries, in conformity with the provisions of Law No. 78-02 of 11 February 1978, with respect to State Monopoly on Foreign Trade.

Tenderers interested in this call for tenders may obtain the specifications from the following address:

Entreprise Nationale des Travaux aux Puits, 2 Rue du Capitaine Azzoug, Cote-Rouge, Hussein-Dey, Alger (Algiers), Algeria — Departement Approvisionnements et Transports (Supplies and Transport Department) — with effect from the date on which this Notice is published.

Offers, of which five (5) copies should be prepared, must be sent in a double sealed envelope, by registered post, to the "Secretariat du DAT" (Secretariat of the Supplies and Transport Department) at the above address, the outer envelope being completely anonymous, bearing no company insignia, and stating simply "APPEL D'OFFRES INTERNATIONAL Numero 1601-1M/DIV — Confidentiel — A ne pas ouvrir" (INTERNATIONAL CALL FOR TENDERS No. 1601-1M/DIV — Confidential — Do not open).

Tenders should be sent to arrive by 12.00 hours on Saturday, 26 November 1983, at the very latest.

Selection will be made within 180 days from the closing date of this Call for Tenders.

REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE

(Algerian Popular Democratic Republic)

MINISTERE DE L'ENERGIE ET DES INDUSTRIES PETROCHIMIQUES

(Ministry for Energy and Petrochemical Industries)

ENTREPRISE NATIONALE DES TRAVAUX AUX PUITS

(National Oil Exploitation Company)

NOTICE OF POSTPONEMENT OF CLOSING DATE

L'Entreprise Nationale des Travaux aux Puits (National Oil Exploitation Company), 2 Rue du Capitaine Azzoug, Cote-Rouge, Hussein-Dey, Algiers, Algeria — hereby informs companies interested in International Call for Tenders No. 0771/I1/MEC for the supply of SPARE PARTS FOR GM AND EMD ENGINES, that the closing date, originally specified as 8.10.1983, has been postponed until 5.11.1983.

REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE

(Algerian Popular Democratic Republic)

MINISTERE DE L'ENERGIE ET DES INDUSTRIES PETROCHIMIQUES

(Ministry for Energy and Petrochemical Industries)

ENTREPRISE NATIONALE DES TRAVAUX AUX PUITS

(National Oil Exploitation Company)

NOTICE OF POSTPONEMENT OF CLOSING DATE

L'Entreprise Nationale des Travaux aux Puits (National Oil Exploitation Company), 2 Rue du Capitaine Azzoug, Cote-Rouge, Hussein-Dey, Algiers, Algeria — hereby informs companies interested in International Call for Tenders No. 0950/AI/MEC for the supply of SPARE PARTS FOR MTU ENGINES, that the closing date, originally specified as 8.10.1983, has been postponed until 5.11.1983.

REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE

(Algerian Popular Democratic Republic)

MINISTERE DE L'ENERGIE ET DES INDUSTRIES PETROCHIMIQUES

(Ministry for Energy and Petrochemical Industries)

ENTREPRISE NATIONALE DES TRAVAUX AUX PUITS

(National Oil Exploitation Company)

NOTICE OF POSTPONEMENT OF CLOSING DATE

L'Entreprise Nationale des Travaux aux Puits (National Oil Exploitation Company), 2 Rue du Capitaine Azzoug, Cote-Rouge, Hussein-Dey, Algiers, Algeria — hereby informs companies interested in International Call for Tenders No. 0998/I1/MEC for the supply of SPARE PARTS FOR DEUTZ ENGINES, that the closing date, originally specified as 8.10.1983, has been postponed until 5.11.1983.

REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE

(Algerian Popular Democratic Republic)

MINISTERE DE L'ENERGIE ET DES INDUSTRIES PETROCHIMIQUES

(Ministry for Energy and Petrochemical Industries)

ENTREPRISE NATIONALE DES TRAVAUX AUX PUITS

(National Oil Exploitation Company)

NOTICE OF POSTPONEMENT OF CLOSING DATE

L'Entreprise Nationale des Travaux aux Puits (National Oil Exploitation Company), 2 Rue du Capitaine Azzoug, Cote-Rouge, Hussein-Dey, Algiers, Algeria — hereby informs companies interested in International Call for Tenders No. 0293/1K/MEC for the supply of SPARE PARTS FOR CATERPILLAR ENGINES, that the closing date, originally specified as 8.10.1983, has been postponed until 5.11.1983.

FEDERAL ISLAMIC REPUBLIC OF COMOROS
GENERAL BOARD OF PUBLIC WORKS
PERFORMANCE OF SURFACE TREATMENTS

NOTICE OF CALL FOR TENDERS

Nature of Works: Treatment of road sections with a single surface priming coat on N'GAZIDJA and N'DZOUANI Islands (total length: 200 km; total area: 900,000 m²).
Financing: International Development Association (I.D.A.)
Participation: National firms of member countries of the IBRD and Switzerland.

Any information regarding the project may be obtained free of charge at the addresses below:

General Board of Public Works
P.O Box 12, Moroni (Comoros)
Bureau Central d'Etudes pour les Equipements d'Outre-Mer (B.C.E.O.M.)
15 Square Max Hymans, 75741 Paris, Cedex 15, France

The tender documents may be obtained at the same addresses from November 15th, 1983 against submission of a crossed cheque in the amount of 3,000 French francs, drawn by a bank on another bank, and payable to B.C.E.O.M.

THE DEADLINE FOR THE DELIVERY OF TENDERS IS JANUARY 2nd, 1984

COMPANY NOTICES

CANON INC.

Advice has been received from Tokyo that the Board of Directors has declared a payment of DIVIDEND of Yen 6.25 per share for the six months period ended 30th June 1983.

Holders of EUROPEAN DEPOSITARY RECEIPTS TO BEARER (SHARE EDR's) wishing to claim this dividend in respect of the shares represented by their share EDR's should present Coupon No. 43 at the office of HILL SAMUEL & CO. LIMITED, 45, BEECH STREET, LONDON EC2P 2LX, where listing forms are available, or BANQUE INTERNATIONALE A LUXEMBOURG, 2 BOULEVARD ROYAL, LUXEMBOURG.

Payment in sterling will be made at the rate of exchange ruling one day after presentation.

Holders of BEARER DEPOSITARY RECEIPTS (SHARE BDR's) wishing to claim this dividend in respect of the shares represented by their share BDR's should present Coupon No. 20 at the office of HILL SAMUEL & CO. LIMITED, 45, BEECH STREET, LONDON EC2P 2LX where listing forms are available or:

ALGEMENE BANK NEDERLAND N.V.,
32 Vijzelstraat,
Amsterdam.
CITIBANK N.A.,
111 Wall Street,
New York,
N.Y. 10015.
SOCIETE GENERALE,
29 Boulevard Haussmann,
75 Paris 9.
THE FUJI BANK LIMITED,
Immermannstrasse 3,
4 Dusseldorf.
KREDIETBANK S.A. LUXEMBOURGEOISE,
43 Boulevard Royal,
Luxembourg.

Payment will be made in U.S. Dollars at the rate of exchange ruling one day after presentation.

Japanese Withholding Tax at the rate of 20% will be deducted from the proceeds of the dividend, except in the case of holders resident in the following countries:

Arab Republic of Egypt	The Netherlands
Australia	New Zealand
Belgium	Norway
Canada	Singapore
Denmark	Spain
Finland	Sweden
France	Switzerland
Ireland	United Kingdom
Italy	United States of America
Korea	West Germany
Malaysia	

To obtain payment under deduction of Withholding Tax at the reduced rate of 15%, residents of the above countries must furnish a declaration of residence as required by the Japanese Ministry of Finance. The declaration in respect of holders resident in the United Kingdom is incorporated in the listing form.

For residents of all other countries a separate declaration must be furnished, giving the name and address of the beneficial owner, the number and definitive numbers of EDR's/BDR's held, and attesting that he is entitled to the 5% Tax Relief pursuant to the Tax Convention between Japan and the country concerned.

Share EDR/BDR holders resident in the Republic of Korea will receive payment under deduction of Withholding Tax at the reduced rate of 12% and residents of Zambia without any deduction subject to the provision of a declaration as set out above.

Attention is drawn to the fact that the above mentioned concessions relating to Japanese Withholding Tax apply only to coupons presented for payment within 8 months of the record date. Thereafter tax will be deducted at the full rate of 20% and it will be the responsibility of the owner to claim from the Japanese Tax Authorities any refund to which he is entitled.

United Kingdom Income Tax at the appropriate rate will be deducted from the proceeds unless the Coupons are accompanied by a United Kingdom Affidavit of Non-residence.

Full information may be obtained from:
HILL SAMUEL & CO. LIMITED,
45 Beech Street,
London EC2P 2LX.

ELECTRICITY SUPPLY COMMISSION (ESCOM)
8½% 1971-1986 U.S.$20,000,000

On September 27, 1983, bonds for the amount of U.S.$1,400,000 have been drawn for redemption in the presence of a Notary Public. The bonds will be reimbursed Coupon no. 13 and following attached on or after December 1, 1983.

The drawn bonds are those, not yet previously redeemed, included in the range beginning

at 14843 up to 17168 incl.

Amount purchased on the market: U.S.$100,000.

Amount outstanding: U.S.$5,000,000.
Outstanding drawn bonds:

6381 and 6382
6388 to 6394 incl.
6529 and 6530
6599 and 6600
7973 to 7977 incl.
8167 and 8168
8315
9403 to 9405 incl.
9592 and 9593
9625 and 9626
9732 to 9734 incl.
9801 to 9807 incl.

The Trustee
FINIMTRUST S.A.

Luxembourg,
October 11, 1983.

B.A.T. INTERNATIONAL FINANCE LIMITED
(B.A.T. INTERNATIONAL FINANCE PLC)
100,000,000 French Francs 7½% Guaranteed Bonds 1987

At the request of the Trustee, we hereby give notice that the nominal amount of FF 5,000,000 has been purchased on the market for redemption due November 15, 1983.

Amount outstanding: FF 58,000,000.

The Principal Paying Agent
KREDIETBANK S.A. LUXEMBOURGEOISE

Luxembourg,
October 11, 1983.

ROYAL BANK OF CANADA
DIVIDEND NO. 385

NOTICE IS HEREBY GIVEN that a Dividend of 50 cents per share upon the paid up common shares of this bank has been declared for the current quarter and will be payable at the Bank and its branches on or after the 24th November, 1983 to shareholders on record at the close of business on 24th October, 1983.

By Order of the Board,
R. J. MOORES,
Vice-President & Secretary.

LEGAL NOTICE

JULIETTA SHOES LIMITED
(In Voluntary Liquidation)

NOTICE IS HEREBY GIVEN, pursuant to section 299 of the Companies Act 1948 that a General Meeting of the Members of the above-named Company will be held at the Offices of Singla & Co., Chartered Accountants, 423, Alexandra Avenue, Harrow, Middlesex, HA2 9SE on Monday, 31st October 1983 at 10.00 a.m. to be followed at 10.30 p.m. by a General Meeting of the Creditors for the purpose of receiving an account of the Liquidator's acts and dealings and of the conduct of the Winding-up to date.

Dated this 5th day of October 1983.
S. K. SINGLA, F.C.A.,
Liquidator.

ART GALLERIES

BROWSE & DARBY, 19, Cork St., W1. 01-734 7984. MATTHEW SMITH — PAINTINGS until Oct. 22.

THE CLARENDON GALLERY, 8, Vigo St. 01-439 4557. Jointly with THE PARKIN GALLERY, 11, Motcomb St., SW1. 01-235 8144. "ARTISTS OF THE YELLOW BOOK AND THE CIRCLE OF OSCAR WILDE." 5 Oct.-31 Oct. Clarendon Gallery; 5 Oct.-5 Nov. Parkin Gallery.

CLUBS

EVE has outlived the others because of a policy of fair play and value for money. Supper from 10-3.30 am. Disco and top musicians, glamorous hostesses, exciting floorshows. 189, Regent St. 01-437 0557.

FINANCIAL TIMES

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Geneva: 15 rue du Cendrier. Telex: 22589. Tel: 311604.
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BUSINESSMANS DIARY

UK TRADE FAIRS AND EXHIBITIONS

Oct. 17-20
Computer Graphics European Conference and Exhibition (01-868 4466)
Wembley Conference Centre

Oct. 18-20
International Business Show (01-405 6233)
N.E.C. Birmingham

Oct. 19-21
Management Services and Equipment Exhibition (Brentwood, Essex (0277) 232030)
Harrogate Exhibition Centre

Oct. 20-30
Motorfair (01-385 1234)
Earls Court

Oct. 23-26
London Business Equipment Show (01-405 6233) Earls Court

Nov. 1-3
Blinds and Shutters 83 (Rickmansworth 0923 774262)
St John's Hotel, Solihull

Nov. 1-3
British Marine Trade Exhibition (Weybridge (0932) 54511)
Sandown Exhibition Centre, Surrey

Nov. 6-10
International Domestic and Contract Textiles Exhibition—DACTEX (01-572 2121)
N.E.C. Birmingham

Nov. 6-10
International Furniture Show (01-724 0851/2)
N.E.C. Birmingham

Nov. 8-10
The Northern Contract Flooring Exhibition (01-236 0911)
Bolton

Nov. 10-13
The 1983 USM Event (Brentwood, Essex (0277) 229453)
Westminster Exhibition Centre, SW1

Nov. 13-15
Times and Sunday Times Business to Business Exhibition (01-739 0677)
Belle Vue, Manchester

Nov. 14-16
Conveyorex 83 (Uxbridge (0895) 38431/9)
Harrogate

Nov. 14-17
Fast Food Fair (01-643 8040)
Brighton

Nov. 15-18
Compec Exhibition (01-643 8040)
Olympia

Nov. 23-24
Entertainment 83 (Eastbourne (0323) 37841)
Harrogate Exhibition Centre

OVERSEAS TRADE FAIRS

Oct. 18-22
International Mining and Minerals Recovery Exhibition—Mining Indonesia (01-486 1951)
Jakarta

Oct. 22-25
COMOMODA Textile Trade Fair (031/266288)
Como, Italy

Oct. 22-30
International Hamburg Boat Show (Poole, Dorset (0202) 687070)
Hamburg

Oct. 23-27
2nd Building and Construction Show—SaudiBuild '83 (01-486 1951)
Riyadh

Oct. 24-27
Computer Exhibition—COMDEX EUROPE (31) 20-480201)
Amsterdam

Oct. 26-Nov. 1
World Telecommunications Exhibition—TELCOM (CH-1218 Grand Saconnex, Geneva)
Geneva

Nov. 3-11
Pan-Arab Food Industry Exhibition (01-636 5366) Sharjah, UAE

Nov. 8-11
Hong Kong Machine Tools, Welding and Metal Fabrication Exhibition (Solihull (021-705) 6707)
Hong Kong

Nov. 13-17
Arab Home and Leisure Show (01-486 1951)
Bahrain

Nov. 14-18
Paris International Electronic Components Exhibition (01-439 3964)
Paris-Nord Exhibition Centre

BUSINESS AND MANAGEMENT CONFERENCES

Oct. 19
Riba: Flat roofs today—the answers (01-637 8991)
Portland Place, W1

Oct. 19
Energy Business Centre: Nova Scotia, energy developments and business opportunities (01-439 9021)
Hyde Park Hotel, SW1

Oct. 19
BMDF: reducing energy costs, the role of the consultant (01-839 2798)
Café Royal, W1

Oct. 20
The Industrial Society: Positive policies for involvement at work (01-839 4300)
Carlton House Terrace, SW1

Oct. 20
ABCM: Timber frame—did World in Action get it right? (01-580 9083)
Old Brewery, Chiswell Street, EC1

Oct. 20
Wincott Lecture: Myth and reality in anti-trust (01-799 3745)
St John's Church, Smith Sq. SW1

Oct. 20-21
FT Conference on competition: Mergers, Acquisitions, buy-outs and public policy (01-621 1355)
London Hilton, W1

Oct. 24-27
FT Conference: The financial services revolution—banks and non-banks in the 1980s (01-621 1355) InterContinental Hotel, W1

Oct. 26
IFS: The Meacher report, the structure of personal income, taxation and income support (01-828 7545)
Regent Palace Hotel, W1

Oct. 26-27
FT Conference: Banking and electronic technology (01-621 1355) Royal Lancaster Hotel, W2

Nov. 1
IPS: Oil, gas and petrochemicals—Success in Exports Too! (Stamford (0780) 56777)
Britannic House, EC2

Nov. 3-5
City of Swansea: Cities in transition (Swansea (0792) 50821)
Swansea Guildhall

Nov. 4
Monadnock: The one-minute manager (01-363 2733) Brussels

Nov. 7-9
CGS Institute: Telecommunications — the next 10 years Windsor (07536 58811)
Tara Hotel, W8

Nov. 8
Staniland Hall Associates: The UK economy in 1984 and 1985 (01-359 6054)
Centre Point, WC1

Nov. 9
BIM: coping with the impact of major change (Corby, Northants, (053-63) 4222)
InterContinental Hotel, W1

Nov. 9-11
IMS: Productivity in the UK (01-363 7452)
Waldorf Hotel, WC2

Nov. 15-16
FT Conference: The second Thatcher Government (01-621 1355) InterContinental Hotel, W1

Anyone wishing to attend any of the above events is advised to telephone the organisers to ensure that there has been no change in the details published.

WORLD STOCK MARKETS

Indices

NEW YORK

DOW JONES

	Oct. 14	Oct. 13	Oct. 12	Oct. 11	Oct. 10	Oct. 7	1983 High	1983 Low	Since C'mpil'tn High	Since C'mpil'tn Low
♦ Industr'ls	1265.52	1261.38	1259.55	1285.14	1284.65	1272.15	1284.65 (10/10)	1027.04 (3/1)	1284.65 (10/10/83)	41.22 (2/7/32)
H'me Bnds	71.89	71.94	72.02	72.08	72.18	72.21	77.84 (8/5)	69.85 (9/8)	—	—
Transport	580.55	577.04	578.38	583.88	589.34	588.70	590.63 (27/6)	434.24 (3/1)	590.83 (27/6/83)	12.32 (8/7/32)
Utilities	137.38	137.38	137.14	137.04	138.38	138.97	140.08 (8/10)	119.51 (3 1)	165.32 (20/4/69)	10.5 (28/4/42)
TradingVol 000-†	71,800	87,750	75,630	79,518	87,050	103,83	—	—	—	—

♦ Day's high 1270.12 (1270.65) low 1251.83 (1250.51)

	Oct. 7	Sept. 30	Sept. 23	Yearago (Approx
Indust'l div. yield %	4.38	4.51	4.43	5.52

STANDARD AND POORS

	Oct. 14	Oct. 13	Oct. 12	Oct. 11	Oct. 10	Oct. 7	1983 High	1983 Low	Since Cmpil'tn High	Since Cmpil'tn Low
Indust'ls	191.80	191.86	191.48	192.21	194.84	192.38	194.84 (10/10)	164.95 (3/1)	194.84 (10/10/83)	3.52 (30/6/32)
Comp's'te	169.86	169.88	169.63	170.54	172.65	170.80	172.65 (10/10)	138.34 (3/1)	172.65 (10/10/83)	4.40 (1/6/32)

	Oct. 5	Sept. 28	Sept. 21	Year ago(Approx)
‡Indust'l div. yield %	3.90	3.89	3.90	5.11
Indust'l P/E ratio	14.51	14.60	14.58	9.22
Long Gov. Bond yield	11.21	11.34	11.50	11.33

N.Y.S.E. ALL COMMON

Oct. 14	Oct. 13	Oct. 12	Oct. 11	1983 High	1983 Low
98.00	96.03	97.98	98.39	99.63 (10/10)	80.92 (24/1)

Rises and Falls

	Oct. 14	Oct. 13	Oct. 12
Issues Traded	1,938	1,844	1,957
Rises	743	655	534
Falls	777	855	1,050
Unchanged	418	353	393
New Highs	41	35	28
New Lows	12	13	15

MONTREAL	Oct. 14	Oct. 13	Oct. 12	Oct. 11	1983 High	1983 Low
Industrial	444.69	445.07	444.56	447.08	468.96 (28/6)	331.18 (4/1)
Combined	422.25	423.06	422.96	425.93	441.28 (28/6)	325.12 (4/1)
TORONTO Composite	2480.7	2487.0	2485.1	2505.7	2588.2 (28/6)	1949.8 (4/1)

NEW YORK ACTIVE STOCKS

Friday	Stocks traded	Closing price	Change on day		Stocks traded	Closing price	Change on day
Gulf Oil	3,009,100	47	+ 1	Cons. Edison	967,400	23½	— ⅛
IBM	2,012,600	131¾	+1⅞	General Motors	859,300	77¾	— ⅜
Cinn Gas	1,531,700	14¾	— ⅜	Lifemark	788,300	37⅞	+ ½
AIT	1,345,800	65¾	+ ⅞	Exxon	775,700	38⅞	+ ⅜
Day. Pwr. Lt	1,141,600	15¾	— ⅛	Tandy	757,600	37¾	— ⅛

	Oct. 14	Oct. 13	Oct. 12	Oct. 11	1983 High	1983 Low
AUSTRALIA All Ord. (1/1/80)	692.7	695.4	695.3	704.7	738.7 (12/9)	467.8 (4/1)
Metals & Minls. (1/1/80)	521.6	521.6	521.2	553.8	614.2 (6/6)	411.6 (4/1)
AUSTRIA Credit Aktien(2/1/62)	54.87	54.89	54.75	54.82	59.8 (6/6)	48.48 (15/2)
BELGIUM Belgian SE (31/12/63)	127.61	128.59	128.88	128.79	134.45 (1/8)	108.58 (4/1)
DENMARK Copenhagen SE (3/1/83)	188.58	186.15	188.38	183.03	204.22 (13/9)	100.00 (3/1)
FRANCE CAC General (31/12/82)	141.10	141.0	140.7	141.5	141.5 (11/10)	96.1 (6/1)
Ind Tendance (31/12/82)	150.2	149.3	149.2	150.0	150.2 (14/10)	98.0 (3/1)
GERMANY FAZ-Aktien (31/12/58)	328.57	327.33	325.36	327.20	331.66 (7/7)	241.88 (25/1)
Commerzbank (Dec1953)	973.48	970.8	983.7	988.5	988.5 (7/7)	727.9 (25/1)
HONG KONG Hang Seng Bank (31/7/64)	(c)	758.51	756.68	735.38	1102.64 (21/7)	690.06 (4/10)
ITALY Banca Comm Ital. (1972)	186.51	187.68	186.75	189.15	214.93 (21/5)	160.45 (10/1)
JAPAN** Dow Average (16/5/49)	9525.63	9472.35	9565.25	9493.09	9565.25 (12/10)	7803.18 (25/1)
Tokyo New SE (4/1/68)	690.08	696.75	697.47	696.28	699.60 (7/10)	574.51 (25/1)
NETHERLANDS ANP-CBS General (1970)	143.3	143.5	143.8	144.8	144.8 (11/10)	108.1 (4/1)
ANP-CBS Indust. (1970)	117.0	117.1	117.5	118.4	118.4 (10/10)	83.5 (4/1)
NORWAY Oslo SE (4/1/83)	215.88	213.57	212.88	216.45	217.88 (10/10)	93.01 (4/1)
SINGAPORE Straights Times (1966)	948.46	945.76	947.44	952.82	992.62 (25/8)	712.29 (5/1)
SOUTH AFRICA Gold (1958)	779.5	772.4	786.6	808.0	1098.5 (1/6)	694.3 (28/5)
Industrial (1958)	915.6	914.5	917.6	925.9	968.7 (28/6)	784.9 (3/1)
SPAIN Madrid SE (31/12/82)	120.82	121.17	(c)	118.86	121.17 (13/10)	98.32 (11/1)
SWEDEN Jacobson & P. (1/1/58)	1428.57	1424.58	1439.49	1471.22	1529.60 (6.9)	898.18 (3/1)
SWITZERLAND SwissBankCpn. (31/12/58)	342.4	342.0	342.1	342.3	347.0 (4/8)	294.4 (4/1)
WORLD Capital Intl. (1/1/70)	—	182.7	182.9	184.2	185.6 (10/10)	154.3 (3/1)

(**) Saturday Oct. 8: Japan Dow (c) TSE (c).
Base values of all indices are 100 except Australia All Ordinary and Metals—500. NYSE All Common—50: Standard and Poors—10: and Toronto—1,000: the last named based on 1975. † Excluding bonds. ‡ 400 industrial. § 400 Industrials plus 40 Utilities, 40 Financials and 20 Transports. c Closed. u Unavailable.

AUSTRIA

[illegible]

BELGIUM/LUXEMBOURG

[illegible]

DENMARK

[illegible]

CANADA

[illegible]

ITALY

[illegible]

NETHERLANDS

[illegible]

NORWAY

[illegible]

AUSTRALIA

[illegible]

HONG KONG

[illegible]

JAPAN

[illegible]

FRANCE

[illegible]

SINGAPORE

[illegible]

SWEDEN

[illegible]

GERMANY

[illegible]

SWITZERLAND

[illegible]

SOUTH AFRICA

[illegible]

SPAIN

1983 High	1983 Low	Oct. 14	Price P'ta
259	209	Bco Bilbao	246
308	255	Bco Central	256
216	200	Bco Exterior	216
234	201	Bco Hispano	207
268	208	Bco Santander	236
367	208	Bco Vizcaya	309
149	106	Dragados	140
57.7	43.7	Hidrola	46.5
49	39.2	Iberduero	41
101.5	59	Petroleos	97.5
93	60.2	Telefonica	93

NOTES:—Prices on this page are as quoted on the individual exchanges and are last traded prices. § Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all.

AMERICAN STOCK EXCHANGE CLOSING PRICES

Continued from Page 25

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NEW YORK CLOSING PRICES

Continued from Page 25

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Authorised Units—continued

Equity & Law Un Tst Mngrs (a) (b) (c)
Amersham Rd. High Wycombe. 0494 33377

Euro Tst Acc	62.1	66 7xd	+0 4	1 73

Robert Fleming & Co Ltd
8 Crosby Square EC3A 8AN. 01-638 5858

AmExFd*	£272 77	278 83		0 62
JapExFd*	£162 75	167.97		1 10

Next subscription day Oct 17 1983
*Fleming American Property Unit Trust.
Latest issue price (15 8) US$10 567.
Units are issued on Feb 15, May Aug. Nov.
*Fleming Property Unit Trust
Latest issue price (29 9) £2 070.
Units are issued on March 25. June 24. Sept 29 & Dec 25.
*Unauthorised.

Guardian Royal Ex Unit Mngrs Ltd (a)
Royal Exchange EC3V 3LS. 01-638 2020.

Gilt & Fixed	111 9	116 3	-0 2	9 81
Growth Eq	95 1	102 3	-0 6	2 07
Guardhill	173.4	179 6xd	-1.1	3.55
Nth Amer	96 7	104.0xd	+2 2	2.10
Pacific	102.92	110 6xd	-2 0	0.74
Prop Share	92 7	99 7	-0 5	2 38
Smaller Cos	106.6	114.7xd	-1.8	1.78

H.B.L. Unit Trust Mngrs Ltd (a) (c) (g)
Premier NT Admin. 5 Rayleigh Rd. Hutton. Brentwood. Essex. 0227-227300

SmllrCosTst	49 5	52.1	-0.6	4 74
Nth Amer	49 9	52 5	-0 6	2 20
JapanFarTst	52 4	55 2xd	-0 5	0 94
Scandinvd Tst	48 8	51.4	-0.2	1 46

Hexagon Services Ltd
4 Gt St Helens. London EC4P 3EP 0708 45322

Austin Frs	109 3	115.1	....	2 34
Brewin Cap	83 2	87 6	....	0 59
Brewin Intl	73 7	77 6	....	4.05
Canada Grh	112.5	121.0	....	0 94

Lawson Fund Managers Ltd (a) (c) (g)
43 Charlotte Sq. Edinbgh 2. 031-225 6001

CharlttSqFd	47 9	49 9		5 28
Penny Sh Fd	14 0	15 0	....	1 d
Aust & Pac	8 5	9 3	....	0 6
High Yield	19 6	21.1	....	10 4
DoAccum	20 7	22 2	....	10 4

MGM Unit Managers Ltd
MGM House, Heene Road, Worthing 01-623 8211

High Inc	123 3	130 4xd	-0 8	6 82
(Accum Uts)	126 9	136 5xd	-0 9	6 82
UK Growth	116 3	125 1xd	-0 3	3 47
(Accum Uts)	117 6	126 7xd	-2 3	3.47

MLA Unit Trust Management Ltd
Old Queen St. SW1A 9JG. 01-222 8576

MLA Uts	182 6	191 7	....	2 79
MLA Int	29.3	30.7	....	0 81

The Money Market Trust
63 Qn Victoria St. EC4N 4ST. 01-236 0952

Call Fund	—	—	....	8 86
7 Day Fund	—	—	....	9 09

†Unauthorised—Sterling Deposit Fund.

[illegible]

Offshore and Overseas—continued

Actibonds Investment Fund SA
37 rue Notre Dame. Luxembourg Tel 47971

Actibonds In	—	$20 23	—

Alliance Capital Management Intl Inc
62 63 Queen St. London EC4. 01-248 8861
Alliance International Dollar Reserves
Distribution Sept 26-Oct 9 (0 003327) 9.05%

Health Care Oct 12	$9 22	....	—
TechnologyOct12	$22.44	....	—
Quasar Oct 12	$49 47	....	—

Bamford Brandt Guernsey Mngt Ltd
PO Box 71. St Peter Port. Guernsey 0481 26541

Tech&Coms	£9 05	9 60	—
IntGrowth	$18 22	19 31	—

Brown Shipley St Co (Jersey) Ltd
PO Box 583. St Helier. Jersey. 0534 74777

[illegible]

Jardine Fleming & Co Ltd
46th Floor, Connaught Centre, Hong Kong.

Curr Bd	$13 26	—	....	9 1
(Accum)	$18 73	—	....	—
Asean	$9 46	—	....	—
(Accum)	$9 46	—	....	—
American	$9 38	—	....	—
(Accum)	$9 38	—	....	—
Mgd Cur	$10 08	—	....	9 50
(Accum)	$10 08	—	....	9.50

Lazard Brothers & Co (Jersey) Ltd
PO Box 108. St Helier. Jersey. CI 0534 37361

LazBrFarE	$14 37	15 29	....	1.09
CoBGd	$140 79	1421.12	....	11 02
D bedBdBd	$10 34	10 38	....	5 0
N Am Fd	$10 50	11.18	....	5 0

Lloyds Bank International, Geneva
PO Box 438. 1211 Geneva 11 (Switzerland)

[illegible]

Insurances—continued

[illegible]

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INSURANCES

[illegible]

INSURANCE & OVERSEAS MANAGED FUNDS

Black Horse Life Ass. Co. Ltd.
71, Lombard St., EC3. 01-623 1288

Black Horse Man. Fd	233.44		
Managed Inv. Fd	157.35	165.64	
Property Fd.	151.07	159.03	
Fixed Interest Fd.	147.14	154.89	
Cash Fd	135.95	143.11	
Income Fd.	171.47	180.50	
Extra Income Fd.	162.17	170.71	
Worldwide Growth Fd.	231.62	243.82	
Balanced Fd.	172.42	181.50	
Smlr Co's & Recy. Fd	203.25	213.95	
Int. Technology Fd	270.97	285.24	
Nth. Amer. & Gen. Fd.	160.38	179.14	
Energy Int. Fd.	107.69	113.36	
Pacific Basin Fund	132.41	139.38	

British National Life Assurance Co. Ltd.
Harlands Rd, Haywards Heath. 0444 414111

Managed	112.8	117.9	-0.4
Property	106.0	111.5	-1.0
Equity	113.5	119.5	-1.1
International	128.6	135.4	-0.4
Fixed Interest	101.5	106.8	-0.3
Deposit	99.2	104.4	+0.1
Managed Pen. Cap.	112.6	118.5	-0.7
Property Pens. Cap.	104.6	110.1	-1.4
Equity Pens. Cap.	107.8	113.5	-1.6
Intnl. Pens. Cap.	134.9	142.0	0.7
Fixed Int. Pens. Cap	99.2	104.4	0.3
Deposit Pens. Cap	97.2	102.3	

Canada Life Group
2-6, High St., Potters Bar, Herts. P. Bar 51122

Equity Gth Sept 29	94.5		
Rtmt. Fed. Aug 6	255.4		
Managed Pen Fund	180.4	189.9	
Property Pen Fund	113.7	119.7	
Index Lnkd Pen Fund	111.1	117.0	
Managed	119.4	125.7	-0.7
Property	103.9	109.4	-0.1
Gilt and Fixed Interest	104.4	109.9	-0.3
Index Linked	97.5	102.7	-0.8
Equity	115.9	122.0	-0.9
Cash	103.3	108.8	
Midland Bk. Unit Tst	116.3	122.5	0.7
Midland Bank Intnl.	139.2	146.6	0.2

Cannon Assurance Ltd.
1 Olympic Way, Wembley HA9 0NB. 01-902 8876

Equity Units	£37.16	-	-0.28
Property Units	£17.17	-	+0.01
Equity Bond/Exec	£24.20	25.61	-0.18
Prop. Bond/Exec	£22.44	23.75	+0.01
Bal. Bd./Exec/Unit	£23.33	24.69	0.05
2nd Equity Acc.	189.0	200.0	-1.4
2nd High Inc/Acc	144.6	153.0	1.3
2nd Property Acc	171.4	181.4	
2nd Managed Acc.	169.1	178.9	0.5
2nd Deposit Acc	144.4	152.8	
2nd Gilt Acc	141.6	149.8	+0.2
2nd American Acc.	195.5	206.9	-0.7
2nd Intl Money Acc	141.5	149.7	+0.2
2nd Index Acc	99.1	104.9	-0.3
2nd Eq. Pens./Acc.	262.1	277.4	-2.3
2nd Hi Inc Pens/Acc	151.9	160.7	-1.5
2nd Prp. Pens/Acc	218.2	230.9	+0.1
2nd Mgd. Pens/Acc	213.7	226.1	0.7
2nd Dep. Pens/Acc	188.9	199.9	
Gilt Pens/Acc	183.0	193.7	+0.4
2nd Am. Pens/Acc	259.9	275.0	-1.2
2ndIntl MoneyPens/Acc	170.9	180.8	+0.3
2nd Index Pens./Acc	104.8	110.9	-0.4
L & E S I F	72.5	76.5	0.5
L & E S.I.F. 2	49.5	52.5	

Current value at Oct 13.

Capital Life Assurance
24 Ludgate Hill, London EC4P 4BD

Key Invest. Fd.	121.20xc	
Pacemaker Inv. Fd.	117.58	

Chieftain Assurance Funds
11 New Street, EC2M 4TP. 01-283 3933

Managed Growth	185.06	195.32	-1.52
Managed Income	87.27	91.86	-1.67
International	124.57	131.13	-1.97
High Income	102.41	107.80	-4.87
Income & Growth	112.61	118.54	-0.74
Basic Resources	129.48	136.29	+0.01
American	191.62	201.70	+0.39
Far Eastern (z)	175.73	184.98	-2.56
Smaller Cos	128.10	135.76	-0.78

G.T. Management Ltd.
16 Finsbury Circus, Lond EC2M 7DJ 01-628 8131

G.T. Plan Bond Fund	121.8	128.3	+0.1
GT Pln High Yld Fnd	113.8	119.8	-2.2
GT Plan Far East Fnd	111.6	117.5	-3.3
GT Pln N. Am Fund	141.4	148.9	1.9
GT Pln UK&G.E. Fnd	126.9	133.6	3.8
GT Pln Wrldwide Fnd	133.2	140.3	-2.6
GT Pension Bnd Fnd	131.6	138.6	+0.1
GT Pen High Yld Fd	129.2	136.0	2.7
GT Pen Far East Fd	135.1	142.3	-4.7
GT Pen N. Am. Fd	207.4	218.4	3.4
GT Pen UK & G.E. Fd	147.0	154.8	-4.3
GT Pen Worldwide Fd	141.8	149.3	3.2

Assicurazioni GENERALI S.p.A.
117, Fenchurch St., EC3M 5DY. 01-488 0733

Intl Managed Bond	166.9	175.7	

General Portfolio Life Ins. C. Ltd.
Crossbrook St., Cheshunt, Herts. Waltham X 31971

Portfolio Fd. Acc.	249.3		
Portfolio Fd. Init.	206.7		
Portfolio Fd. Cap.	238.3		
Investment A uts.	249.2	262.4	

Gresham Unit Ass. Ltd.
2-6, Prince of Wales Rd. B'mouth. 0202 767655

Managed Fd	272.3	286.9	
Money Fd	154.9	163.1	
Equity Fd.	232.9	245.4	
Fixed Int. Fd.	117.1	123.4	
Property Fd	171.0	180.2	
Managed Pen. Fd.	247.8	261.1	
Equity Pension Fd	186.6	196.6	
Fixed Int. Pen. Fd.	163.8	172.6	
High Yield Pen. Fd.	161.5	170.2	
Money Pension Fd.	127.5	134.2	
Property Pension Fd	126.9	133.7	

Gresham/Framlington

American & Gen Fd.	262.8	276.9	3.1
Income Fd	178.6	188.2	-1.6
Int'l. Growth Fd	276.3	291.1	2.7
Capital Fund	190.0	200.2	-0.6
Recovery Fund	144.8	152.6	0.3

Growth & Sec. Life Ass. Soc. Ltd.
48, London Fruit Exchange, E1 6EU 01 377 1122

Flexible Finance	£1,526	284.0	
Landbank Secs.	£6.15	162.8	
Landbank Secs. Acc.	185.6	190.4	
G & S. Super Fd.	£11.376	122.5	

Guardian Royal Exchange
Royal Exchange, EC3 01 283 7101

Guardian Assurance

Property Bonds	305.6	318.3	

GRE Linked Assurance Ltd.

Managed Initial	203.0	213.6	-0.9
Do. Accum	225.3	237.1	-1.0
Equity Initial	249.3	262.5	+0.1
Do. Accum	276.7	291.3	+0.1
Fixed Int. Initial	189.2	199.2	-0.1
Do. Accum	210.0	221.1	-0.1
Intnl. Initial	217.4	228.8	-1.1
Do. Accum	241.3	254.0	1.2
North American Initial	101.9	107.3	
Do. Accum	102.9	108.4	
Pacific Accum	94.6	99.6	-0.9
Index-Linked Gilt Init.	92.6	97.4	-1.0
Do Accum	93.5	98.4	-1.0
Property Initial	124.2	130.8	
Do Accum	137.7	145.0	
Deposit Initial	122.6	129.1	
Deposit Accum.	136.1	143.3	+0.1

GRE Pensions Management Ltd.

Pens. Managed Initial	198.5	208.9	-0.4
Pens. Managed Acc.	215.3	226.6	-0.4
Pens. Equity Initial	244.1	256.9	-0.2
Pens. Equity Acc	264.8	278.7	-0.2
Pens. Fxd. Int. Initial	192.7	202.8	
Pens. Fixed Int. Acc.	209.0	220.0	
Pens. Int'l Initial	197.7	208.1	-1.3
Pens. Int'l Acc.	214.5	225.8	-1.3

Continued on adjacent Page Mon-Fri and Stock Exchange Dealings Page Sat.

Hambro Life Assurance P.L.C.
Hambro Life Ctr, Swindon, SN1 1EL 0793 28291

Fixed Int. Dep. Acc.	185.2	195.0	
Equity Acc.	387.0	407.4	

OFFSHORE AND OVERSEAS

NOTES

FT LONDON SHARE INFORMATION SERVICE

BRITISH FUNDS

"Shorts" (Lives up to Five Years)

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
22May	22N	Exch. 13¼pc '83	100½	15.4	13.44	8.65
12Jun	12D	Exch. 10pc 1983	100¼	6.5	9.99	9.30
15Jul	15Ja	Funding 5½pc '82-84‡‡	99¼	8.6	5.56	9.30
20Aug	20F	Exch. 11¼pc 1984	100⅜	14.7	11.18	9.26
22N	22May	Exchequer 14pc. 1984	102¼	15.4	13.66	9.62
19D	19Jun	Exch. 3pc 1984	95¾	13.5	3.13	9.60
26Mar	26S	Treasury 12pc 1984	101¾	22.8	11.79	9.95
22Aug	22F	Treasury 15pc 1985	105¼	18.7	14.24	10.57
22S	22Mar	Exch. 12pc Cnv. '85	102	16.8	11.77	10.45
21N	21My	Treasury 3pc 1985	91¾	14.9	3.26	8.64
15Jan	15Jul	Treasury 11½pc 1985	101¼	8.6	11.35	10.59
3 Mar	3 Sept	Treas 8¾pcCnv '85	97½	28.7	8.98	10.18
22May	22N	Exch. 12¼pc 1985	102⅝	15.4	11.97	10.90
25 Aug.	25F	Exch. 11¾pc '86	101¼	19.7	11.58	10.98
—		Treas. 10pc Cnv 1986	98¾	—	10.13	10.58
19N	19May	Treasury 3pc 1986	87½xd	13.10	3.43	8.49
19 Nv	19 My	Exch. 10½pc Cv '86	99¼xd	13.10	10.60	11.01
12D	12Jun	Treasury 12pc '86	101⅞	6.5	11.77	11.12
10Ja	10Jul	Treasury 8½pc '84-86‡‡	95⅛	3.6	8.94	10.56
14 Jan	14 Jy	Treas. 12¼pc '86 Cnv.	106½	7.6	11.50	9.46
29Apr	29Oct	Exch. 14pc 1986	107¼xd	22.9	13.07	11.16
22Jul	22Jan	Exch. 13¼pc 1987	105¼	15.6	12.60	11.25
10 Fb	10 Ag	Tr 10¼pc Cv '87	97¼	—	10.49	11.08
24 Fb	24 Aug	Exchequer 2½pc 1987	82	18.7	3.05	8.82
Oct 6	Apr 6	Exch. 10½pc 1987	98¼	1.9	10.69	11.13
1N	1May	Funding 6½pc '85-87‡‡	89¼xd	26.9	7.29	10.25
—		Treas 10pc '87 (£20pd)	19⅜	—	10.32	11.06
14Ja.	14Jul	Treasury 3pc 1987	81⅜	7.6	3.69	8.95
3 May	3N	Treas 12pc 1987	102½xd	27.9	11.70	11.22
26Jul	26Ja	Treasury 7¾pc '85-88‡‡	90¼	20.6	8.60	10.68
10 My	10 Nv	Exch 10½pc '88	97¾	4.10	10.72	11.12
—		Treas 9¾pcCv'88 £30pdle.	29½	—	10.15	10.86
1Ja	1Jul	Transport 3pc '78-88	77½	25.5	3.87	8.95

Five to Fifteen Years

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
25Ap.	25Oct.	Treas. 9½pc '88	93¾xd	19.9	10.11	11.10
22Aug.	22F	Treasury 11½pc 1989	102⅛	18.7	11.43	11.32
14 Dc	14 Jn	Treas 10½pc 1989	101¼	—	10.85	11.27
15Ap	15Oct	Treasury 5pc '86-89	79¼	8.9	6.31	9.64
15Jul.	15Ja.	Treasury 13pc 1990‡‡	110⅛	8.6	12.15	11.37
22Sept	22Mar	Exch. 12½pc 1990	105⅞	16.8	11.90	11.37
15D	15Jun	Treasury 8¼pc '87-90‡‡	91⅛	9.5	9.33	10.70
10Jul	10Ja	Treasury 11¾pc 1991	104⅝	3.6	11.58	11.43
5Oct.	5Ap.	Funding 5¾pc '87-91‡‡	78¼	1.9	7.37	9.98
25Ap.	25Oct.	Exch. 11pc 1991	98⅝xd	19.9	11.13	11.22
22Jul.	22Ja.	Treasury 12¾pc '92‡‡	110¼	15.6	11.89	11.36
21Aug.	21Fb.	Treasury 10pc 1992	96¼	15.7	10.51	10.87
25Fb.	25Aug.	Exch. 12¼pc '92	106¼	19.7	11.73	11.42
22Mar.	22S	Exchequer 13½pc '92	111⅝	16.8	12.20	11.54
14 Jan	14 Jy	Treasury 12½pc '93‡‡	109⅝	7.6	11.75	11.38
15Mar.	15S	Funding 6pc 1993‡‡	76	9.8	7.95	9.94
23May	23N	Treasury 13¾pc 1993‡‡	119⅛	18.4	12.11	11.43
1 Mar	1 Sep	Treasury 14½pc '94‡‡	120¾	26.7	12.2	11.40
27O	27Ap	Exchequer 13½pc 1994	111⅞xd	20.9	12.03	11.47
22F	22Aug	Exch. 12½pc 1994	108½	18.7	11.73	11.41
17May	17N	Treasury 9pc '94‡‡	89¼xd	11.4	10.01	10.57
25Jul	25Ja	Treasury 12pc '95	106⅞	20.6	11.58	11.44
1N	1May	Gas 3pc '90/95	63¼xd	26.9	4.78	7.81
21Ja	21Jul	Exch. 10¼pc 1995	96¾	14.6	10.87	11.12
15May	15N	Treasury 12¾pc '95‡‡	108¼xd	10.10	11.62	11.26
22Jul.	22Ja.	Treas. 14pc '96	119½	15.6	13.05	11.49
15S	15Mar	Treasury 9pc '92/96‡‡	89⅝	9.8	10.13	10.64
3N	3May	Treasury 15¼pc '96‡‡	124¾xd	27.9	12.19	11.44
15 My	15 Nv	Exchequer 13¼pc '96‡‡	112⅞xd	10.10	11.68	11.29
1Ap	1Oct	Redemption 3pc 1986-96	68¾	25.8	4.37	6.65
22Jul	22Ja	Treasury 13¼pc '97‡‡	116½	15.6	11.69	11.27
21Aug	21F	Exchequer 10½pc 1997	98¼	15.7	10.87	10.97
1Mar	1S	Treasury 8¾pc 1997‡‡	87⅝	26.7	10.11	10.62
27Ap	27Oct	Exch. 15pc 1997	123⅞	20.9	12.17	11.48
1N	1May	Treasury 6¾pc '95-98‡‡	73⅝xd	26.9	9.13	10.24
30Mar	30S	Treas. 15½pc '98‡‡	129⅛	24.8	12.00	11.39

Over Fifteen Years

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
20May	20N	Exch. 12pc 1998	105⅞xd	13.4	11.27	11.12
15Jul	15Ja	Treasury 9½pc 1999‡‡	94⅛	8.6	10.36	10.60
26S	26Mar	Exch. 12¼pc 1999	108¼	22.8	11.34	11.15
19N	19May	Treasury 10½pc 1999	96½xd	13.10	10.78	10.85
14Ja	14Jul	Treas. 13pc 2000	117¼	7.6	11.37	11.08
22N	22May	Treas. 14pc '98-01	124⅝	15.4	11.27	11.30
22Jul	22Ja	Exch. 12pc '99-02	109⅝	15.6	11.24	11.06
25Ja	25Jul	Treas. 13¾pc 2000-03	122⅞	20.6	11.51	11.15
19S	19Mar	Treasury 11½pc '01-04	106⅝	15.8	10.88	10.76
14Ja	14Jul	Funding 3½pc '99-04	48¼	7.6	7.39	9.25
21May	21N	Treasury 12½pc '03-05	118¼	14.4	11.00	10.81
5Ap	5Oct	Treasury 8pc '02-06‡‡	82	1.9	9.79	10.05
22Jul	22Ja	Treasury 11¾pc 03-07	110⅝	15.6	10.90	10.76
26S	26Mar	Treas. 13½pc '04-08	122⅞	22.8	11.08	10.82
10Mar	10S	Treasury 5½pc '08-12‡‡	60⅞	4.8	9.12	9.57
26Jul	26Ja	Treasury 7¾pc '12-15‡‡	81½	20.6	9.72	9.84
12 Jan.	12D	Exch. 12pc '13-17	119⅝	6.5	10.37	10.29

Undated

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
1F.	1Aug.	Consols 4pc	39½	27.6	10.35	—
1Jun	1D	War Loan 3½pc‡‡	36¼	25.4	10.02	—
1Ap.	1Oct.	Conv. 3½pc '61 Aft.	46½	25.8	7.55	—
5Ap	5Oct	Treasury 3pc 66 Aft.	29¾	1.9	10.12	—
5 JaApJulOc		Consols 2½pc	24¼	1.9	10.14	—
1Ap	1Oct	Treasury 2½pc	24½	25.8	10.25	—

Index-Linked

Interest Due		Stock	Price £	Last xd	(1)	(2)
30Mar	30Sept	Treas. 2pc I.L. '88	103½	24.8	2.91	3.31
16 Mar.	16 S.	Do. 2pc I.L. '96	105¼	18.8	3.14	3.28
22 May	22 N	Do. 2½pc Cnv '99	95⅞	—	2.83	2.95
24 Mr	24 Spt	Do. 2½pc I.L. 2001.	96⅛	18.8	3.02	3.13
20May	20N	Do. 2½pc I.L. 2003.	95½xd	13.4	2.97	3.08
19 Ja	19 Jul	Do. 2pc I.L. 2006	99⅝	13.6	2.93	3.02
20May	20N	Do. 2½pc I.L. 2009.	95¼xd	13.4	2.90	2.99
23F	23Aug	Do. 2½pc I.L. 2011	101¼	18.7	2.89	2.96
26Jul	26Jan	Do 2½pc I.L. 2016	93¼	20.6	2.82	2.89
—		Do 2½pc IL 2020 (£30pd)	30½	—	2.75	2.81

Prospective real redemption rate on projected inflation of (1) 10% and (2) 7%

INT. BANK AND O'SEAS GOVT. STERLING ISSUES

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
28Ja	28Jly	Australia 13½pc 2010	114	28.6	12.16	12.09
23M	23S	Euro Inv Bk 11pc Ln 2002	94½xd	23.8	11.73	11.83

CORPORATION LOANS

COMMONWEALTH AND AFRICAN LOANS

LOANS

Public Board and Ind.

LOANS—continued

Financial

Building Societies

FOREIGN BONDS & RAILS

AMERICANS

CANADIANS

BANKS, H.P. & LEASING

BANKS—Continued

Hire Purchase, Leasing, etc.

BEERS, WINES & SPIRITS

BUILDING INDUSTRY, TIMBER AND ROADS

CHEMICALS, PLASTICS

CHEMICALS, PLASTICS—Cont.

DRAPERY AND STORES

ELECTRICALS

ELECTRICALS—Continued

ENGINEERING

FOOD, GROCERIES, ETC.

FOOD, GROCERIES—Cont.

HOTELS AND CATERERS

INDUSTRIALS (Miscel.)

INDUSTRIALS—Continued

Dividends Paid	Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's	P/E
Mar May	Keep Trust 5p	10½	20.9	‡0.15	—	‡	—
Feb. July	Kelsey Inds	185	6.6	8.0	1.7	6.2	12.7
Nov. April	Kershaw (A.) 5p	130	19.9	‡15.0	0.6	‡	(18.6)
Jan. Aug.	Keen-E-Ze Hldgs.	76	18.7	3.0	0.5	5.6	—
Jan. Aug.	L.C.P. Hlds	90	20.6	3.6	1.2	5.7	(20.3)
Jan July	LDH Group	26	2.6	—	—	—	—
Oct. April	L.R.C. Int. 10p	105	1.8	b2.95	2.3	4.0	13.7
July-Dec	Lamont Hldgs. 10p	33	6.6	†1.3	1.8	5.7	12.8
Dec. May	Lawtex	36	17.81	8—	—	—	ф
Mar. Oct.	Lep Group 10p	465	4.7	17.5	0.3	5.4	64.5
Oct July	Lilleshall 10p	34	9.5	d1.0	—	4.2	—
Jan Oct	Lon. & Liv. 10p	49	23.5	b2.75	3.5	8.0	4.4
Jan. Sept.	London & Midl'd	109xc	15.8	7.75	1.1	10.2	12.2
Jul. Dec.	Lon. & Nthn. Grp.	78	6.6	F4.2	ф	7.7	11.8
—	‡Lon. Priv. Health	23	—	—	—	—	11.5
Mar Oct	Longton Inds.	57	5.9	1.0	—	2.5	—
	Low & Bonar 50p	112	25.4	†5.0	2.8	6.6	(6.1)
—	MCD Group	44	—	u1.0	2.2	3.2	20.1
—	‡MMT Computing 5p	77	—	b1.68	2.6	3.1	17.9
June Dec.	M.Y. Dart. 10p	20	1.11	0.1	—	0.7	—
May Sept.	M'c'rthy Ph. 20p	149	15.8	7.0	2.7	6.7	7.0
Oct. May	Macfarlane Gp.	143	19.9	†3.52	2.1	3.5	17.5
July Nov.	Macfellan 20p	34xd	3.10	d1.5	1.6	6.3	12.2
Aug. Mar.	Macpherson (D.)	37	18.7	4.2	0.6	16.2	(21.0)
Oct. Apr.	Magnolia Group	54	19.9	2.3	3.2	6.1	6.3
Apr. Oct.	Man. Ship Can. £1	135	9.80	3.5	6.8	3.8	4.1
Oct Apr	Marley	74	15.8	†2.5	0.5	4.8	(70.8)
Feb. Oct.	Marling Ind. 10p	41½	1.8	1.08	1.7	3.7	(18.7)
Dec. Jun.	Marshall L'xy. 'A'	25	4.10	‡1.2	—	‡	—
Jan. July	Marshall's Univ	56	7.6	8—	—	—	110.5
Nov May	Martin-Black	29	5.79	—	—	—	—
—	‡Mathesons 7¼%	£85	30.6	Q7¼%	2.3	19.7	—
Jan. June	Metal Box £1	252	20.6	11.55	1.8	6.5	(10.1)
Nov. June	Metal Closures	111	19.9	5.7	1.8	7.3	(7.2)
April Dec.	Metalrax Jenlique	9½	15.3	‡0.5	—	‡	—
Dec. June	Mettoy	8	5.81	—	—	—	—
July Jan	‡Midland Marts Grp	123	9.5	4.0	2.1	4.7	14.6
July Dec.	Moben Grp 1p	30	19.9	†0.19	15.4	0.9	7.5
Mar. Oct.	M'santo 5pc 82-6	£262	9.8	Q5%	—	†1.9	—
Jan. July	Morgan Crucible	117	6.6	†7.5	0.6	9.4	(18.5)
Jan. Aug.	Moss (Robt.) 10p	71	6.6	2.0	2.0	4.0	15.2
—	‡MWW Computers	195xd	3.10	4.0	4.0	2.9	12.1
Mar. Sept.	Nash Inds.	50	1.8	4.0	ф	11.8	ф

LEISURE—Continued

Dividends Paid	Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's	P/E
—	GRA Group 5p	34½	—	—	—	—	44.3
Jan-July	Grampian TV A 10p	57	25.4	3.6	2.9	9.4	4.4
May Oct.	HTV Non-Vtg	168xd	3.10	11.0	ф	9.4	ф
May Oct.	Horizon	128	5.9	†3.6	5.7	4.0	5.6
Jan Aug	Intasun 10p	139	18.7	4.0	4.5	4.1	6.3
May	‡Intervision Video 10p	26	11.4	1.0	2.1	4.0	13.2
June-Dec	Juliana's Hldgs 2p	295	—	b4.9	2.4	2.4	21.3
Jan-April	LWT "A"	171	11.4	11.08	1.1	9.3	13.7
Jan Jul	Leisuretime Int 10p	62	19.9	g1.54	ф	3.6	ф
June Jan.	Mngmt. Ag. M. 10p	114	6.6	8.75	1.6	11.0	8.3
Apr. Dec.	Medminster 10p	55	21.3	†4.0	0.8	10.4	17.3
October	‡Mcc World Grp 10p	163	5.9	b3.0	2.5	2.5	23.7
—	‡Nationwide 5p	20½	—	—	—	—	—
—	‡Norvic Int 20c	39	—	—	—	—	—
Jan. Sept.	Norton Opax. 10p	118	1.8	t2.77	4.3	2.6	8.5
July	‡Owners Abroad	26¼	11.4	0.5	4.5	2.7	12.0
June Nov	Photax (Lon.)	38	30.4	—	—	—	—
—	‡Pineapple Dance St 10p	110	—	u1.5	2.1	2.0	27.2
Sept. Apr.	Pleasurama 5p	310	1.8	t5.75	4.5	2.6	18.5
Feb-July	‡Radio City 'A' NV	125	23.5	g5.6	1.6	6.5	13.3
July Jan	Riley Leisure 10p	169	4.7	†3.95	1.7	3.4	23.3
Apr. Nov.	Saga Hols. 20p	85	11.4	d3.73	—	6.3	—
April	Samuelson Grp £1	395	21.2	w12.0	2.8	4.5	13.5
Dec May	Scott. TV 'A' 10p	104	25.4	7.35	2.2	10.3	6.3
—	‡SelecTV 10p	34	—	—	—	—	—
May Nov	TSW 5p	20	25.4	0.9	3.3	6.4	6.8
—	‡TVS N/Vtg 10p	75	—	—	—	—	41.3
—	‡Television Servs 10p	24	—	b0.2	3.3	1.2	36.9
Oct. Apr	Trid'nt TV 'A' 10p	100½	18.7	†4.26	1.4	6.1	17.2
—	‡21st Century Dist	150	—	—	—	—	—
April Sept	Webb (Jos.) 5p	19	15.8	d0.51	8.5	3.8	—
Apr. Nov.	Zetters 5p	76	19.9	3.10	2.9	5.8	8.4

MOTORS, AIRCRAFT TRADES

Motors and Cycles

Dividends Paid	Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's	P/E
—	B.L. 50p	55	—	—	—	—	—
—	‡Coleman Milne 10p	60xd	19.9	†1.0	3.7	2.4	9.7
Mr.Je.S.D.	Gen. Mts. Units	215	8.8	Q12c	—	3.7	—
Nov	Honda Motor Y50	279	11.10	†Q20%	9.1	1.0	18.7
—	Lotus Car 10p	63	9.11	—	—	—	—

Commercial Vehicles

Components

Garages and Distributors

NEWSPAPERS, PUBLISHERS

PAPER, PRINTING ADVERTISING

PROPERTY

INSURANCES

LEISURE

PROPERTY—Continued

SHIPPING

SHOES AND LEATHER

SOUTH AFRICANS

TEXTILES

TOBACCOS

TRUSTS, FINANCE, LAND

Investment Trusts

INVESTMENT TRUSTS—Cont.

Finance, Land, etc.

OIL AND GAS

OIL AND GAS—Continued

OVERSEAS TRADERS

PLANTATIONS

Rubbers, Palm Oil

Teas

MINES

Central Rand

Eastern Rand

Far West Rand

O.F.S.

Finance

Diamond and Platinum

Central African

MINES—continued

Australians

Dividends Paid	Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's
—	‡ACM 20c	17½	—	—	—	—
—	Allstate Expln NL	38	—	—	—	—
—	‡Australis Mng NL	22	—	—	—	—
—	Balmoral Resources	19	—	—	—	—
—	‡Black Hill Mins.	42	—	—	—	—
—	‡Bond Corp.	66	—	Q10c	ф	9.8
Nov. Apr	‡Bougainville 1 Kina	140	11.3	mQ3.21	1.2	1.4
May Nov	‡CRA 50c	324	11.3	tQ3c	—	0.6
—	‡Carr Boyd 20c	70	—	—	—	—
—	‡Central Kalgoorlie	35	—	—	—	—
—	‡Central Pacific	29	—	—	—	—

Tins

Miscellaneous

NOTES

REGIONAL AND IRISH STOCKS

OPTIONS

3-month Call Rates

"Recent Issues" and "Rights" Page 18

CURRENCIES, MONEY and CAPITAL MARKETS

FOREIGN EXCHANGES

World tensions boost dollar

This is not the first time that the dollar has threatened to go down the slippery slope, only to look remarkably fit and strong one week later. The temptation to mark the currency down has to be tempered by caution, because although falling interest rates and the U.S. trade deficit are expected to drag the dollar down the timing never seems quite right, and some unforeseen event crops up that sends dealers rushing to buy once again.

Dr Henry Kaufman of Salomon Brothers set his seal of approval on the firmer dollar last week by suggesting that there will not be an enduring reduction in interest rates even if the U.S. Budget deficit is cut.

There were also signs of continuing strong growth in the economy from a stream of economic statistics published last week. This renewed earlier fears of possible overheating, and the prospect of moves by the Federal Reserve to restrain inflationary pressure through higher interest rates.

Many observers believe the Fed is taking a neutral view of the rates structure at present, although there was considerable disappointment in the bond market when the minutes of the August Federal Reserve Open Market Committee meeting failed to produce details of credit policy.

The weekly money supply announcement no longer holds quite so much interest for the financial markets now that M1 along with M2 and M3 is within target range. But the air of caution was underlined by expectations that Friday's figure would produce a rise in M1 for the third week running, with most estimates pointing towards a figure of about $1bn.

This was the general economic background to the firmer dollar last week, but some observers believed the currency was largely diverted onto an upward path by increasing world tension. Reports of an incident on the border between North and South Korea followed the growing war clouds in the Gulf after the French decision to deliver five Super-Etendard strike aircraft to Iraq.

EMS EUROPEAN CURRENCY UNIT RATES

	ECU central rates	Currency amounts against ECU October 14	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian Franc ...	44.9008	45.8833	+2.19	+1.71	±1.5447
Danish Krone ...	8.14104	8.16501	+0.29	−0.19	±1.6425
German D-Mark	2.24184	2.25651	+0.65	+0.17	±1.0642
French Franc ...	6.87456	6.88389	+0.28	−0.20	±1.4052
Dutch Guilder ...	2.52595	2.52760	+0.07	−0.41	±1.4964
Irish Punt	0.72569	0.727171	+0.20	−0.28	±1.6699
Italian Lira	1403.49	1370.09	−2.38	−2.38	±4.1505

Changes are for ECU, therefore positive change denotes a week currency. Adjustment calculated by Financial Times.

OTHER CURRENCIES

Oct. 14	£	$		£ Note Rates
Argentina Peso...	21.11-21.31	14.173-14.193	Austria	27.40-27.70
Australia Dollar..	1.6540-1.6470	1.0970-1.0976	Belgium	80.60-81.40
Brazil Cruzeiro ..	1,161.5-1,161.5	776.0-780.0	Denmark	14.08-14.22
Finland Markka..	8.4775-8.5040	5.6630-5.6650	France	11.90-12.02
Greek Drachma..	138.60-139.20	92.50-93.00	Germany	3.89¼-3.93¼
Hong Kong Dollar	12.14-12.20	8.12-8.19	Italy	2355-2090
Iran Rial	130.50*	86.10*	Japan	348-353
Kuwait Dinar (KD)	0.4330-0.4340	0.28980-0.28985	Netherlands	4.36-4.40
Luxembourg Fr..	79.85-79.95	53.26-53.28	Norway	10.90-11.00
Malaysia Dollar..	3.5050-3.5150	2.3440-2.3460	Portugal	183-205
New Zealand Dlr.	2.2635-2.2685	1.5095-1.5115	Spain	219½-235
Saudi Arab. Riyal	5.2040-5.2100	3.4800-3.4805	Sweden	11.62-11.78
Singapore Dollar	3.19-3.20	2.1345-2.1365	Switzerland	3.13¼-3.18¼
Sth. African Rand	1.6775-1.6795	1.1185-1.1195	United States	1.48½-1.50½
U.A.E. Dirham	5.4910-5.4975	3.6720-3.6735	Yugoslavia	192-202

* Selling rates.

THE POUND SPOT AND FORWARD

Oct 14	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	1.4900-1.5020	1.4995-1.5005	0.03-0.08c dis	−0.44	0.16-0.21dis	−0.49
Canada	1.8400-1.8510	1.8485-1.8495	0.02-0.12c dis	−0.45	0.05-0.15dis	−0.22
Nethlnd.	4.37-4.40½	4.39¾-4.40¾	1⅛-⅞c pm	3.07	3⅝-3⅜pm	3.07
Belgium	79.30-80.00	79.85-79.95	5c pm-5 dis	—	2-12dis	−0.35
Denmark	14.13½-14.21	14.19½-14.20½	0.10-1.15ore dis	−0.53	3.75-4.90dis	−1.22
Ireland	1.2570-1.2670	1.2650-1.2660	0.32-0.40p dis	−3.41	0.90-1.05dis	−3.08
W. Ger.	3.90½-3.93½	3.92½-3.93½	1½-1pf pm	3.82	3⅝-3⅜pm	3.43
Portugal	185.25-187.25	186.50-187.00	235-500c dis	−23.61	770-1785dis	−27.36
Spain	227.25-228.50	228.00-228.30	285-350c dis	−16.70	850-1010dis	−16.30
Italy	2,371-2,384	2,381-2,383	15¾-17¾lire dis	−8.19	49½-52½dis	−8.56
Norway	10.94-11.01	10.99½-11.00½	3.65-4.35ore dis	−4.36	4⅞-3⅞pm	5.02
France	11.94-12.01	11.99-12.00	3½-4½c dis	−3.88	15½-18½dis	−5.67
Sweden	11.66-11.73	11.72-11.73	2.40-2.95ore dis	−2.74	7.10-7.75dis	−2.53
Japan	348-351	349-350	0.80-0.70y pm	2.57	2.40-2.20pm	2.63
Austria	27.45-27.65	27.58-27.63	8½-6½gro pm	3.26	22¼-17¾pm	2.92
Switz.	3.18½-3.19½	3.18-3.19	1¾-1¼c pm	5.65	10.35-11.05d	−3.89

Belgian rate is for convertible francs. Financial franc 81.15-81.25. Six-month forward dollar 0.27-0.32c dis. 12-month 0.60-0.70c dis.

FORWARD RATES AGAINST STERLING

	Spot	1 month	3 month	6 month	12 month
Dollar	1.5000	1.5006	1.5018	1.5027	1.5062
D-Mark	3.9300	3.9180	3.8965	3.8620	3.8050
French Franc	11.9950	12.0340	12.1650	12.3810	12.7600
Swiss Franc	3.1850	3.1695	3.1510	3.1180	3.0590
Japanese Yen	349.50	348.74	347.20	344.51	339.90

BANK OF ENGLAND TREASURY BILL TENDER

	Oct. 14	Oct. 7		Oct. 14	Oct. 7
Bills on offer	£100m	£100m	Top accepted rate of discount	8.8643%	8.8442%
Total of applications	£523.9	£488m	Average rate of discount	8.8582%	8.8369%
Total allocated	£100m	£100m	Average yield	9.06%	9.04%
Minimum accepted bid	£97.79	£97.795	Amount on offer at next tender	£100m	£100m
Allotment at minimum level	33%	70%			

CURRENCY MOVEMENTS

Oct. 14	Bank of England Index	Morgan Guaranty Changes%
Sterling	83.5	−7.4
U.S. dollar	126.4	+15.0
Canadian dollar	92.0	+1.0
Austrian schilling	117.2	+3.5
Belgian franc	90.7	−11.4
Danish kroner	80.0	−6.1
Deutsche mark	126.8	+7.9
Swiss franc	152.1	+13.3
Guilder	116.6	+5.1
French franc	67.4	−14.7
Lira	49.8	−11.6
Yen	153.4	+11.0

Morgan Guaranty changes: average 1980-1982=100. Bank of England Index (base average 1975=100).

CURRENCY RATES

Oct. 14	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	—	0.709040	0.576772
U.S. $	8½	1.05959	0.860607
Canadian $	9.48	*	1.06104
Austria Sch	3¾	19.5516	15.8782
Belgian F	9	56.6139	45.8833
Danish Kr.	7½	10.0439	8.16501
D mark	4	2.77962	2.25651
Guilder	5	3.11678	2.52760
French F.	9½	8.50321	6.88389
Lira	17	1687.93	1370.09
Yen	5½	246.990	200.995
Norwgn Kr.	8	7.76785	6.31040
Spanish Pta	—	151.376	131.070
Swedish Kr	8½	8.27010	6.75582
Swiss Fr.	4	2.25481	1.82733
Greek Dr'ch	20½	98.6160	80.0623

* CS/SDR rates for Oct 13: 1.30905.

THE DOLLAR SPOT AND FORWARD

Oct 14	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	1.4900-1.5020	1.4995-1.5005	0.03-0.08c dis	−0.44	0.16-0.21dis	−0.49
Ireland†	1.1830-1.1875	1.1865-1.1875	0.28-0.24c pm	2.64	0.79-0.71pm	2.53
Canada	1.2325-1.2336	1.2325-1.2330	0.05-0.02c pm	0.34	0.12-0.09pm	0.34
Nethlnd.	2.9290-2.9410	2.9300-2.9320	0.95-0.85c pm	3.68	2.65-2.55pm	3.54
Belgium	53.15-53.38	53.26-53.28	5½-4¾c pm	1.12	5¼-4¼pm	0.37
Denmark	9.4850-9.4975	9.4725-9.4775	¼ore-4½c pm	—	1½-2dis	−0.74
W. Ger.	2.6110-2.6290	2.6180-2.6190	0.94-0.89pf pm	4.18	2.60-2.56pm	3.93
Portugal	124.00-124.70	124.40-124.70	150-320c dis	−22.64	500-900dis	−22.48
Spain	151.90-152.40	152.15-152.25	195-230c dis	−16.75	540-640dis	−15.50
Italy	1,587-1,693	1,588-1,589	10-10¾lire dis	−7.82	32¾-33¾dis	−8.23
Norway	7.3230-7.3410	7.3250-7.3300	2.20-2.50ore dis	−3.48	6.10-6.40dis	−3.41
France	7.9825-8.0275	7.9950-8.0000	2.15-2.35c dis	−3.37	10.00-10.40d	−5.29
Sweden	7.8040-7.8300	7.8190-7.8240	1.36-1.55ore dis	−2.22	3.90-4.10dis	−2.04
Japan	232.55-234.35	232.75-232.85	0.63-0.58y pm	3.11	1.84-1.79pm	3.11
Austria	18.35-18.45½	18.38-18.40	6.10-5.50gro pm	3.77	18.25-14.25pm	3.31
Switz.	2.1170-2.1305	2.1205-2.1215	1.12-1.07c pm	6.19	2.95-2.90pm	5.51

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency. Belgian rate is for convertible francs. Financial franc 54.11-54.16.

EXCHANGE CROSS RATES

Oct. 14	Pound St'rling	U.S. Dollar	Deutschem'k	Japanese Yen	French Franc	Swiss Franc	Dutch Guild	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling	1.	1.500	3.930	349.5	11.995	3.185	4.398	2382.	1.849	79.90
U.S. Dollar	0.667	1.	2.620	233.0	7.997	2.123	2.932	1588.	1.233	53.27
Deutschemark	0.254	0.382	1.	88.93	3.052	0.810	1.119	606.1	0.470	20.33
Japanese Yen 1,000	2.861	4.292	11.24	1000.	34.32	9.113	12.58	6815.	5.290	228.6
French Franc 10	0.834	1.251	3.276	291.4	10.	2.655	3.666	1986.	1.541	66.61
Swiss Franc	0.314	0.471	1.234	109.7	3.766	1.	1.381	747.9	0.581	25.09
Dutch Guilder	0.227	0.341	0.894	79.48	2.728	0.724	1.	541.7	0.420	18.17
Italian Lira 1,000	0.420	0.630	1.650	146.7	5.036	1.337	1.846	1000.	0.776	33.54
Canadian Dollar	0.541	0.811	2.125	189.0	6.487	1.723	2.378	1288.	1.	43.21
Belgian Franc 100	1.252	1.877	4.919	437.4	15.01	3.986	5.504	2981.	2.314	100.

FINANCIAL FUTURES

LONDON

CHICAGO

WEEKLY CHANGE IN WORLD INTEREST RATES

	Oct. 14	change		Oct. 14	change
LONDON			NEW YORK		
Ls. a rates			Prime rates	11	Unch'd
7 day Interbank			Federal funds	9¼	
3 mth Interbank			3 Mth. Treasury Bills	8.76	+0.17
Treasury Bill Tender	8.8582		6 Mth. Treasury Bills	8.94	+0.17
Band 1 Bills			3 Mth. CD	9.35	+0.10
Band 2 Bills			FRANKFURT		
Band 3 Bills			Lombard	5.50	Unch'd
3 Mth. Treasury Bills			One Mth. Interbank	5.80	+0.025
1 Mth. Bank Bills			Three month	6.20	+0.075
3 Mth. Bank Bills			PARIS		
TOKYO			Intervention Rate	12.25	Unch'd
One month Bills	6.71875	Unch'd	One Mth. Interbank	12.4375	−0.25
Three month Bills	6.84375		Three month	12.50	−0.1875
BRUSSELS			MILAN		
One month			One month		Unch'd
Three month			Three month		+ ⅛
AMSTERDAM			DUBLIN		
One month		Unch'd	One month		Unch'd
Three month		+ ⅛	Three month		Unch'd

London—band 1 bills mature in up to 14 days, band 2 bills 15 to 33 days, and band 3 bills 34 to 63 days. Rates quoted represent Bank of England buying or selling rates with the money market. In other centres rates are generally deposit rates in the domestic money market and their respective changes during the week. Band 4 bills 8⅝.

MONEY MARKETS

A mood of inertia

Interest rates on the London money markets were very steady last week, reflecting expectations that clearing bank base rates will remain at the present level for some time. This mood was encouraged by sterling's reasonably good performance on the foreign exchanges, where it lost ground to the strong dollar, but improved against other major currencies, reflecting its status as a petrocurrency at a time when the war between Iran and Iraq has threatened to escalate, and endanger supplies of oil from the Gulf.

Economic news was somewhat mixed, but on balance produced few surprises. When the Bank of England allowed a reduction in bank base rates earlier this month it was assumed that the September money supply figures were good, and the financial markets had already discounted the fall of ½ per cent in sterling M3 by the time it was announced on Tuesday.

The size of Government borrowing was a disappointment however, and continues to give rise to some concern in the City, while the industrial production figures published on Thursday did nothing to allay the air of growing inertia. Trends in U.S. interest rates also discouraged any hopes of lower London rates, while Lloyds Bank financial review forecast that base rates will return to 10 per cent by the end of the year.

In the U.S. details of the August FOMC meeting not only caused dismay, but it seems equally unlikely that the September meeting resulted in any change in credit policy.

The Fed intervened several times to inject money market liquidity, when the Federal funds rate was between 9⅛ per cent and 9⅝ per cent, and seemed to be aiming for a general level of around 9½ per cent, which would be in line with unchanged policies.

In Europe the German Bundesbank kept interest rates firm by allowing a repurchase agreement of DM 6.5bn to expire, and to only replace part of the lost liquidity by currency swaps credited to banks in three batches. Excess money supply growth is expected to prevent any major relaxation in German monetary policy until the new year.

In Brussels the Belgian National Bank increased the interest rate on three-month Treasury certificates, but this was the only indication of official concern at the weakness of the Belgian franc in the European Monetary System.

LONDON MONEY RATES

Oct. 14 1983	Sterling Certificate of deposit	Interbank	Local Authority deposits	Local Auth. negotiable bonds	Finance House Deposits	Company Deposits	Discount Market Deposits	Treasury Bills ♦	Eligible Bank Bills ♦	Fine Trade Bills ♦
Overnight	—	3-9⅛	9	—	—	8⅛-9¼	3-9	—	—	—
2 days notice	—	—	9-9⅛	—	—	—	—	—	—	—
7 days or ...	—	—	—	—	—	9¼-9⅜	—	—	—	—
7 days notice	—	9-9 1/16	9-9⅛	—	—	—	9	—	—	—
One month	9 1/16-9 1/32	9¼-9 5/16	9¼	9⅞-9⅝	9⅜	9⅜-9⅝	9	8 31/32-9 1/32	9 1/32	9 9/32
Two months	9 3/16-9 5/16	9 3/16-9⅜	9 5/16	9¾-9½	9⅜	9 5/16-9⅜	9	8 29/32-9 1/32	8 31/32	9 7/32
Three months	9⅜-9 1/16	9⅜-9 7/16	9 5/16-9⅜	9¾-9½	9 7/16	9 5/16-9⅝	8⅞-9	8⅞-8 25/32	8 31/32	9 7/32
Six months	9⅜-9 9/16	9½-9 9/16	9½	9¼-9	9 9/16	—	—	—	8 13/16-8 25/32	9 5/16
Nine months	9½-9 11/16	9⅝-9¾	9⅝	10⅛-9⅞	9¾	—	—	—	—	—
One year	9 11/16-9 13/16	9¾-9⅞	9¾	10-9¾	9⅞	—	—	—	—	—
Two years	—	—	10⅜-10½	—	—	—	—	—	—	—

ECGD Fixed Rate Export Scheme IV. Average Rate for interest period September 7 to October 4 1983 (inclusive) 9.719 per cent.

Local authorities and finance houses seven days' notice, others seven days fixed. Long-term local authority mortgage rates nominally three years 10¾-10⅞ per cent; four years 11 per cent; five years 11⅛ per cent. ♦ Bank bill rates in table are buying rates for prime paper. Buying rates for four months' bank bills 8 27/32-8 13/16 per cent; four months trade bills 9 7/32 per cent.

Approximate selling rate for one-month Treasury bills 8 31/32-9 per cent; two months 8 27/32-8 13/16 per cent and three months 8 13/16-8⅞ per cent. Approximate selling rate for one-month bank bills 9 per cent; two months 8 15/16 per cent; and three months 8⅞ per cent; trade bills 9 11/32 per cent; two months 9 11/32 per cent and three months 9 9/32 per cent.

Finance Houses Base Rate (published by the Finance Houses Association): 10 per cent from October 1 1983. London and Scottish Clearing Bank Rates for lending: 9 per cent. London Deposit Rates for sums at seven days' notice: 5½ per cent.

Treasury Bills: Average tender rates of discount 8.8582 per cent. Certificates of Tax Deposit (Series 6). Deposits of £100,000 and over held under one month 9½ per cent; one-three months 9¾ per cent; three-six months 9¾ per cent; six-12 months 10 per cent. Under £100,000 9½ per cent from October 6. Deposits held under Series 4-5 10 per cent. The rate for all deposits withdrawn for cash 8 per cent.

INTEREST RATES

EURO-CURRENCY INTEREST RATES

(Market closing rates)

Oct. 14	Short term	7 days notice	Month	Three Months	Six Months	One Year
Sterling	9-9⅛	9 1/16-9 3/16	9 5/16-9 7/16	9 5/16-9 7/16	9½-9⅝	9¾-9⅞
U.S. Dollar	9 5/16-9 7/16	9 7/16-9 9/16	9⅜-9½	9 11/16-9 13/16	9 13/16-9 15/16	10-10¼
Can. Dollar	8¾-9⅛	8¾-9⅛	9⅛-9 7/16	9¼-9 9/16	9½-9 13/16	9¾-9 15/16
D. Guilder	5¾-5⅞	5⅞-6	5 9/16-5 11/16	6 1/16-6 3/16	6 3/16-6 5/16	6⅜-6½
S. Franc	1⅝-1⅞	1⅞-2	3 1/16-3 3/16	4 3/16-4 5/16	4¼-4⅜	4⅜-4½
Deutschm'rk	5 5/16-5 7/16	6 1/16-5 7/8	5½-5⅝	5 13/16-5 15/16	5 13/16-5 15/16	6⅛-6¼
Fr'nch Franc	12¼-12½	12⅜-12⅝	12⅝-12⅞	14 7/16-14 11/16	15⅞-16⅛	16⅜-16⅝
Italian Lira	15¾-16¾	16-17	17-17¾	17⅞-18⅜	18⅜-18⅞	18¾-19⅜
Belg. Franc						
Conv.	7¼-7¾	7½-8	8½-9	9¼-9¾	9½-10	10-10½
Fin.	7¼-7¾	8½-8¾	8¾-9	9¼-9½	9¾-10	10-10¼
Yen	6⅛-6⅜	6 3/16-6 5/16	6½-6⅝	6 9/16-6 11/16	6 9/16-6 11/16	6⅝-6¾
D. Krone	9¼-9¾	9¼-9¾	10½-11	10¾-11¼	11-11½	11-11½
Asia $ (Sing.)	9 5/16-9 7/16	9 7/16-9 9/16	9½-9⅝	9 11/16-9 13/16	9¾-9⅞	10-10⅛

FT LONDON INTERBANK FIXING

(11.00 a.m. OCTOBER 14)

3 month U.S. dollars		6 month U.S. dollars	
bid 9 11/16	offer 9 13/16	bid 9 3/4	offer 9 7/8

The fixing rates are the arithmetic means, rounded to the nearest one-sixteenth of the bid and offered rates for $10m quoted by the market to five reference banks at 11 am each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque Nationale de Paris and Morgan Guaranty Trust.

MONEY RATES

NEW YORK

Prime rate	11
Fed funds (lunch-time)	9¼
Treasury bills (13-week)	8.76
Treasury bills (26-week)	8.94

GERMANY

Lombard	5.5
Overnight rate	5.525
One month	5.80
Three months	6.20
Six months	6.20

FRANCE

Intervention rate	12.25
Overnight rate	12.375
One month	12.4375
Three months	12.50
Six months	12.5625

JAPAN

Discount rate	5.5
Call (unconditional)	6.65625
Bill discount (3-month)	6.84375

SWITZERLAND

Discount rate	4
Overnight rate	1⅞-2⅛
One month	3½-3⅝
Three months	4-4¼

NETHERLANDS

Discount rate	5
Overnight rate	5¾-6
One month	5⅞-6
Three months	6⅛-6¼
Six months	6¼-6⅜

$ CERTIFICATES OF DEPOSIT

One month	9.3-9.4
Three months	9.45-9.55
Six months	9.6-9.7
One year	9.7-9.8

LONG TERM EURO $

Two years	10⅞-11⅛
Three years	11-11¼
Four years	11⅛-11⅜
Five years	11⅜-12

SDR LINKED DEPOSITS

One month	8 9/16-8 13/16
Three months	8⅞-9⅛
Six months	9 3/16-9 7/16
One year	9⅛-9⅜

ECU LINKED DEPOSITS

One month	8 9/16-8 13/16
Three months	9¼-9½
Six months	9⅝-9⅞
One year	9 13/16-10 1/16

Office Equipping and Furnishing

Market analysts are predicting confidently that, as the recession eases, 1984 could be the 'year of replacement' for business equipment, as more companies dispense with out-dated office equipment and further adapt to new technology

Urgent need to cut costs and boost office productivity

By MICHAEL WILTSHIRE

THE MUCH-HERALDED "Office of the Future" is still a long way off. Despite all the excitement over computer technology, plenty of hindrances still exist along the pathway to improved office productivity.

Yet, as suppliers gather for the International Business Show, which opens tomorrow at the National Exhibition Centre, near Birmingham, there is a feeling that the message projected by the industry is beginning to get through.

More and more companies are seeing new office systems, despite their high initial costs, as the key to the improved efficiency needed for survival. As a result, the office equipment industry reckons it could well see a strong growth in orders next year.

First, however, the hindrances. Although micro mania may be sweeping through the office world—Britain, for example, now has a higher number of computers per capita than any other country in Europe—other trends indicate a high rate of waste of space, time and money in the average office.

● In the United States, $95bn a year could be saved, says a major new study, if corporations put systematic office productivity programmes to work. But the obstacles are many and few companies are even attempting such measures.

The report, sponsored by Steelcase, the world's largest office furniture manufacturing company, and carried out by the Houston-based American Productivity Centre, reveals that office productivity measurement in the U.S. is still in its infancy, even though the office, by the turn of the century, will employ anywhere from 70 to 90 per cent of the U.S. workforce.

● In Britain, the big finding of the recent Orbit report, an exhaustive research project on information technology in buildings, is that the majority of the current building stock is woefully inadequate for the effective integration of office automation.

Faced with this, prospective users have two fundamental choices: extensive structural alteration, or the use of fully integrated furniture systems to compensate for the inadequacies of the building.

The latter option is becoming a major reason for the growing demand for systems furniture, quite apart from the functional benefits usually associated with these systems.

Mr Bill Cottle, chairman of the advisory committee of the International Business Show: he predicts a boom year ahead for the business equipment sector

● The scope for improvements in productivity and efficiency in Britain's offices is emphasised by another new report which shows that nearly 50 per cent of top British companies do not have a full understanding of the impact of modern business technology on their businesses.

The survey also reveals that 61 per cent of senior managers in the UK still rely on secretaries with shorthand—rather than on centralised dictation systems—and that nearly 74 per cent of companies admit that they are wasting costly office space.

The survey, Business Equipment Trends, 1983-84, by Korn-Ferry International of London, for the British Equipment Trade Association, examines the equipment purchasing habits of 255 companies within a turnover band of between £1m and £500m plus.

The most positive fact to arise from the Korn-Ferry survey is that 12.3 per cent of companies already offer their employees "networking" systems, whereby executives can work from home, linked to a central computer database.

A large percentage of the companies surveyed report that they intend to commit themselves to technology. Although nearly 28 per cent admitted to delaying purchasing decisions because of the recession, by far the majority (67.7 per cent) say that they now intend to increase expenditure on technology-led products over the next two years.

Overall, only 13.8 per cent of the companies questioned believed that Britain is not investing enough in office technologies.

Next year, in fact, could well see the first boom in business equipment purchasing in Britain since 1973, as companies seek to replace old, obsolete and often worn-out office equipment.

Market analysts say that the life-cycle of many business equipment products has been extended—primarily as a result of the recession—from five years to around seven or eight years.

Companies are now being compelled to replace failing equipment and to take advantage of prices which are, in real terms, lower than they were in 1973, according to Mr Bill Cottle, chairman of the advisory committee of the International Business Show.

Business equipment suppliers in a highly competitive and fragmented industry see two reasons why 1984 could be a boom year—the first is that the move out of recession is service industry-led—and that means offices, rather than factories.

The second reason for suppliers' optimism is that many British companies realise that they cannot defer purchasing decisions forever in the hope that a cheaper or more advanced piece of equipment will come along, as some con-

CONTINUED ON NEXT PAGE

Mr Gary Vinson, managing director of Herman Miller (UK), leaders in the systems furniture market which is expected to grow by 18 to 20 per cent next year

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BUSINESS EQUIPMENT TRENDS IN BRITAIN

"When did you last review your business systems and make a major investment?"

This question was put to 255 companies in a recent survey, of which:

- 73 companies had turnovers of between £1m and £50m.
- 72 companies had turnovers from £50m to £100m.
- 72 companies with turnovers from £100m to £500m.
- 38 companies with turnovers in excess of £500m.

REVIEW	£1–50m	£50–200m	£100–500m	£500m+
5 to 10 years ago	2.7	5.6	1.4	—
2 to 5 years ago	12.4	11.3	6.9	5.3
1 to 2 years ago	17.8	14.1	11.1	7.9
Each year	65.7	64.8	75.0	86.8
INVESTMENT				
5 to 10 years ago	2.7	2.8	1.4	—
2 to 5 years ago	23.3	14.1	15.3	2.6
1 to 2 years ago	32.9	36.6	20.8	18.4
Each year	38.4	40.9	58.3	76.4

The frequency of reviews varies largely due to the size of the companies as does the frequency of investment.

The overall results indicate that the majority of companies (73.1%) review their business systems each year. They either make a major investment each year (53.3%) or did so within the last two years (27.2%).

The intention to invest in additional equipment was most common for electronic switchboards (28.3%), followed by word-processors (18.8%), microcomputers (16.4%), computer networking (16.1%) and electronic mailing (15%).

The most commonly used business equipment was photocopiers (97.6%), electronic typewriters (86.9%), wordprocessors (78.9%), microcomputers (77.5%), mainframe computers (76.9%), and minicomputers (76.8%).

Source: Korn/Ferry International and British Equipment Trade Association.

OFFICE EQUIPPING AND FURNISHING II

The U.S: investment in new offices technology will soar to $17bn by 1990, as Roberta Walton reports

Obsolete office environments require costly re-modelling

ANSWER three questions (i.e. either yes or no):

- **Word processing equals office automation.**
- **The "office of the future" is here and now.**
- **Office automation is a technology problem.**

A score of three "yes" answers means you must return to your personal computer—you still have a lot to learn.

If, however, three "no's" was your tally, then congratulations are due. For, having broken through three common mythical barriers to clear-cut thinking on office technology management, you can now join a cadre of advanced information specialists, consultants, and environmental planners currently tackling the automation issue for eagerly expectant corporate executives worldwide.

As the price of investment in new office technology soars (approaching $17bn by 1990 in the U.S. alone), obsolete office environments require costly remodelling, and as personnel productivity flags, top-level corporate managers are reaching out for help.

And no wonder. With some 320 vendors and hundreds more product lines active in the U.S. computer terminal market alone, decision-making becomes a management burden.

Added to that is the worrisome adage that says it is impossible to predict future technology more than five years' hence, and quite impossible to know which of that technology will actually be in general use.

But refuge for the panicky office manager can be found in emerging automation research and practice in the U.S. where the line side of management is discovering the benefits of multi-disciplinary approaches to automation planning for office environments.

Increasingly, whether through vendor groups, corporate sponsors, outside consultancies, or space design/architectural firms, model team-planning approaches are being taken to establish a framework for action in this controversial area.

Unlike years ago, when automation implicated the vendor alone, today there are a myriad of professional constituencies involved in the field.

A number of new roles are maturing for vendors of office products, interior space planners, and corporate managers, as well. The key influence behind these changes, which supports all effort to manage change itself, is the belief that automation does not concern product, or technology, alone.

Rather, the consensus among U.S. researchers in the field is that automation is a process involving human resources and corporate culture in a totally integrated planning scheme that takes the entire work environment—physical and organisational—into consideration.

As expressed by the president of a recently-founded U.S. company dedicated to supplying corporations with office automation strategies: "The office of the future is an integrated, computer-based information system which has a *formalised* approach to management of an organisation's total resources—whether in facilities, human capital, or data. The office of the future will always be in the future and will constantly change."

The formalised approaches that automation planners articulate for their clients are, by definition, reflective of an organisation's goals in physical growth and operational productivity.

U.S. companies active in defining and implementing automation strategies espouse this view. This group includes such companies from the vendor side as Wang Laboratories, of Lowell, Massachusetts; the leading American office furnishings manufacturer, Steelcase, of Grand Rapids, Michigan; multidisciplinary architecture and interior design firms CRS, of Houston, Texas and Interspace, of Philadelphia, Pennsylvania, and a host of respected automation consultants whose professional number continues to multiply with demand.

Team planning: a macro view

For most interior designer/space planners, the subject of office automation poses a threat to a long practical experience gleaned from years of designing conventional offices where electric typewriters and printer/copiers came closest to a notion of automated technology.

Today, space planners face a number of challenges for which they feel admittedly unprepared. But, in the view of practitioners who engage in automation planning on a daily basis, neither the space planner nor the client should shoulder exclusive responsibility for structuring an automated office environment.

Current planning methodology calls for a union between the designer and the client company—the latter represented by a senior management-level person with project clearance authority. Together, they form two elements of a potentially larger team.

The ideal team in an office automation programming effort might include representatives from such specialties as electrical design, acoustics, lighting engineering, behavioural psychology, corporate human resources, data processing/information systems, as well as a number of other professions where work is geared to creating an office environment for optimum employee productivity.

A good example of how automation team planning can succeed is evident in the ongoing headquarters project for the multinational company TRW, of Cleveland, Ohio.

Mr J. Michael Olderman, the project director for the new headquarters, and principal of Philadelphia design division of Interspace, explained: "Our project called for the design of 425,000 sq ft, distributed on four floors of the new headquarters.

"Because the client dictated that he wanted to assure a building lifespan of 50 years, we had to build and design for flexibility to accommodate automation change, corporate growth, and a number of other hard-to-quantify factors.

Steelcase Series 9000 workstations at a major West Coast communications centre in the U.S. The Steelcase Strafor group is the world's largest office furniture manufacturer, with plants in the U.S., France, Germany, Japan and North Africa

"For this reason, the project was structured as a team concept—a four-legged stool, if you will," continued Mr Olderman. "The 'legs' consist of the client, our firm, the construction management company, and the exterior architect."

Specify

Unusually, Interspace (an interior space planning firm) was selected for the job before the architectural firm was identified.

This put the interiors group in an advantageous position to specify structural bay sizes and a building module suited to expanded power and configuration needs.

The opinion of outside consultants was sought on every level of the project. For example, after completing an internal study on the direction of prevailing technology into such areas as fibre optics, lasers, and infra-red systems, TRW tested its findings with outside technical experts to obtain confirmation of data.

In the schematic design phase, an in-depth TRW cultural study of the corporate psyche was completed by an Interspace team member who is a behavioural psychologist. Results helped formulate a mixture of open landscape and enclosed offices, based on employee needs; some 48 per cent of staff will be equipped with enclosed, private spaces.

Methods employing value engineering practices, based on automation criteria, dictated an eight-inch-high access floor throughout the building to deal with anticipated cable management changes.

Similarly, the ceiling was designed for accessibility to handle HVAC (central service for heating, ventilation, and air conditioning). All components, including landscape partitions, are fully demountable and relocatable.

"Having a range of experts in each of the relevant disciplines, including design of wire management systems, was invaluable," concludes Mr Olderman. TRW selected a local area network system (LAN) which is distributed from a central building power source to risers on each floor, that, in turn, route signals to "bay boxes" on each level.

Costly

The latter supply signals to automated equipment through movable connectors so that there is total flexibility to move devices on each floor as required.

The TRW project offers evidence of a large-scale project's team planning methodology. The strategy is costly, but, in Mr Olderman's opinion, "it provides creative tension among team players and leads to innovative solutions that might otherwise be overlooked."

The TRW facility is designed to accommodate 700 people for occupancy in December 1984. The on-schedule project comprises future expansion plans for the 1990s.

Also promulgating team-planning philosophy is the dominant office furnishings manufacturer in the States, Steelcase, which approach to office furnishings integration in the form of several specialised research divisions.

Mr Don Korell, director of research for the company, cautions office automation planners to continue their work beyond decisions to purchase hardware and software.

"Too often, the team disbands prematurely. We believe that real team effort begins with deployment of equipment in an effort to integrate the physical, social, organisational, and psychological environ- has its own inter-disciplinary ment.

"In office automation, what is needed is not simply a selection committee but a process/implementation committee," adds Mr Korell.

Steelcase practises what it preaches. The company is now engaged in intensive post-occupancy evaluations and implementation analyses on its own recently-occupied $50m headquarters at Grand Rapids, Michigan. The 385,000 sq. ft. facility employs the latest in state-of-art plant engineering, construction, and interior design techniques.

Large groups more aware

As evidenced by TRW and Steelcase, larger companies tend to be more aware of the continuing need to implement through modification. Mr Korell says: "The trend is that if an organisation has an active and management-supported facilities group and owns its own space, the need for continuous program monitoring is more readily identified and filled.

"Through Steelcase's office, building, and people background," says Mr Korell, "we've done numerous studies on the impact of technology on people and on buildings."

To answer the frequently-posed question: "How do I know there is longevity for my building, my technology, and the environment?" Mr Korell's department tries to supply analyses for clients that will lead to management tools.

Mr Korell identifies three "team players" in automation programming:

First, there must be a systems network, represented by the team leader, that stipulates user-goals and expectations of what will be accomplished with terminals and technology.

Secondly, the people/user/procedure side (usually represented by human resources departments) should play a strong role.

The third component is physical support, both through the facility and workstation, as managed by the architect/space planner or facility manager.

"All of these interests have to be represented. If you eliminate one, you won't get a holistic view," concludes Mr Korell.

The holistic, or macro, view of automated facilities planning has spurred co-operative research efforts in the area by a number of leading corporations in the U.S., among them, Wang Laboratories and the CRS Group.

"The more we work in this area," states Mr Duncan Sutherland, director of office automation programmes at Wang Laboratories, "the more we notice that 'micro' issues continue to undermine the significance of the larger, macro-view of automation; namely, automation's effect on the manager, and by association, on the productivity of employees."

Together with CRS Group, a company of 3,100 people with corporate divisions in such diverse fields as architecture, interior space planning, process engineering, and heavy construction), Wang has embarked on a three-to-five-year research effort called, "PROBE: Office Technology and Top Management."

The goal of the project is "to understand the issues and ideas concerning office technology in the executive suite." Among the outcomes of research will be a performance specification for integrating office automation into top-level management functions.

A team approach to the study will involve a top-management subject group. Corporation candidates are now being evaluated for participation in the pilot study. Candidates are prestigious corporations which are of mutual client interest to Wang and CRS Group.

By project definition, the company selected will be risk-oriented, technologically sophisticated, and will have a large, top-management team.

"Our goal," explains Mr Sutherland, "is to develop a methodology to help managers scope out the broad issues of automation. There has always been a communications gap between technical and non-technical management. We hope to leverage the intellectual resources of an organisation to articulate top management requirements in technology."

Possibly one or two pilot case studies of companies are intended for completion by the end of this year.

Mr Sutherland emphasises that through the architectural interface with CRS and its subdivision, Environmental Planning and Research (EPR), the joint study will reflect multi-disciplinary automation needs.

Solutions

"It is not segregational. What participating pilot organisations and future users of our research will obtain is a set of technological goals and solutions, as well as performance requirements for facilities and human resources.

"One of our overt goals was self-education," Mr Sutherland explains. "We're taking a leadership role in tackling hard questions." A premise behind the Wang/CRS effort is that facilities planning must be integrated into the management process.

"We need to elicit from management unstructured and ill-thought-out goals and objectives which are very important to an organisation. Then, we need to mesh CRS's and Wang's professions into a synthesis that reflects the importance of two dimensions—both the physical and electronic environment."

All automation specialists agree with Mr Sutherland's thesis that technology management is a knowledge problem. The primary criterion for implementing automation change in an organisation is in-house, top-level corporate knowledge. Mr Don Korell, of Steelcase, echoes this theme: "There has to be in-house corporate soul-searching before any automation plan can be launched. Corporate executives must be able to identify their needs and objectives, or they will fail.

"Under optimum conditions, the process will not end with the technology, but will continue with the environment in post-installation phases."

The quest for higher productivity

CONTINUED FROM PREVIOUS PAGE

sumers have done, for example, with word-processors.

To continue to delay is to risk falling irretrievably behind the competition.

The last upsurge in business equipment was in 1973—just prior to the oil crisis—and some of the office equipment purchased then is still in use, though much of it is outdated and inefficient.

Companies which monitor the life-cycle of their products report that the average age of their equipment has increased by at least one year.

Hamilton Leasing, which is among the leading groups providing leases for office equipment, quote figures which mirror the trend, with upgrades of equipment now taking place after three years, as against 2½ years.

Britain's offices, in general, present an immense potential market place for equipment and furniture suppliers who, in recent years, have fallen heavily into discounting in the battle to win new orders.

Staffing

There are signs now that this heavy discounting is being reduced as orders, particularly for computer-related furniture systems, are rising steadily.

Another Koru-Ferry finding is that two-thirds of the companies surveyed believed that new technology would decrease staff levels. But Mr Cottle of IBS believes that "while we must remain alert to the social consequences of new technologies, our experience indicates that companies which are installing new equipment do not, in fact, make people redundant but instead increase their efficiency and are therefore able to take on additional work without employing new staff."

Although more than 73 per cent of the companies in the survey say that they review office equipment purchases each year, only a narrow majority (56.7 per cent), currently have a particular person charged with purchasing responsibility, with more board directors (62.8 per cent) being involved in choosing computer-orientated systems.

Evidence that UK companies continue to feel the pressures of increasing rent and rate costs is revealed by the fact that a massive 73.9 per cent of those surveyed feel that they are not using space effectively.

Suppliers in Britain's £180m furniture market will draw encouragement from the fact that nearly 39 per cent of the companies claim that they will invest in office systems furniture within the next two years.

This indicates that UK companies are apparently determined to adapt to new technology and to see their operations more highly geared to modern business systems.

The market for systems furniture alone is expected to grow by at least 18 to 20 per cent, according to an equipment industry specialist, Mr Gautam Barua, director of the National Business Equipment Survey.

"Unlike the market for copiers and word processors, the demand for office furniture is essentially cyclical in nature," says Mr Barua.

Herman Miller, which leads Britain's £45m market for systems furniture, is expecting 1984 to be "a dynamic and decisive year" in this sector.

Restructure

It will be a dynamic year on at least two levels, he says. Firstly, because managers are looking at buildings in a different way—the issue of the utility of a building and its facilities affects what is done in it and that includes the equipment and furniture.

Secondly, as so many companies have re-organised themselves they now need to restructure and establish their office planning, although the purchasing will be fairly rational and pragmatic, he suggests.

Office managers will not be blinded by some so-called "systems," but will be looking for true flexibility to suit organisational change, plus the trend towards integrated space and the changes in work patterns.

Herman Miller expects to see yet more suppliers entering the crowded systems market — but also a shake-out as the larger companies become larger and the smaller ones become smaller.

Discomfort

Managers have also become increasingly aware of the relationship between ergonomically-designed workstations and efficiency. The discomfort, fatigues and general aches and pains which can all result from use of the wrong or outmoded equipment can lead to sharp falls in individual productivity.

There is no valid reason for this situation — both product and ergonomic prescriptions exist. High standards of ergonomic excellence can be attained quite easily and at moderate cost, Steelcase maintains.

At the same time, office space is now so expensive, especially in the City of London, that work stations are now becoming more compact and the rationalisation of space is vital, comments Mr Geoffrey Greenwood, founder of Intercraft, which now furnishes many international companies and has one of the largest turnovers of systems furniture in the UK.

Likewise, Mr Bob Denton, managing director of Vickers Furniture, confirms that there is a growing awareness among office planners that today's furniture systems are a key factor in increasing office efficiency.

While older managers may have resisted computer-led technology, younger managers "want to get their fingers on the keyboards," comments Mr Peter Linden, of Linden Pride.

"A lot of big companies which have centralised computers are now also indulging in personal stand-alone computers. And with this technology there is also the need for versatile new furniture systems to support it," he adds.

The general mood of optimism among the larger furniture suppliers is also echoed by Project Office Furniture, which claims to be the leaders in the UK's wooden office furniture sector. Project's turnover is expected to top £18m for the year ending October 1983, as compared with £14.7m turnover in 1981-82.

Architects and space planners are tuning-up for long-overdue changes in the office environment. Building Design Partnership — Europe's biggest multi-disciplinary consultancy — has investigated the problems of designing for the electronic office and it predicts a big rush to modernise even relatively new office premises.

Busy

Space Planning Services, Britain's largest independent office planning consultancy, has never been as busy as it is today. For too long office users have not noticed the steady deterioration in an over-crowded, ill-ventilated business environment, says SPS.

Now, however, office managers are becoming far more aware, with the advent of new information technology, of how a well-planned office can cut costs and boost productivity.

Despite the outmoded conditions of many of Britain's offices, the growing awareness of what can be done to improve thet office environment is the best news yet for the 350 exhibiting companies at this year's International Business Show.

- *Orbit study: information technology and office design. Summary from Eosys, Clove House, The Broadway, Farham Common, Slough. Price £200.*
- *Business Equipment Trends, 1983-84: Korn-Ferry International, 2-4, King Street, St. James's, London SW1 6QL. £15.*

Advances in technology mean that even the newest buildings will need further change within 10 years

Rapid changes bring dilemma for designers

Influences on office buildings

COLIN AMERY

IN OFFICE DESIGN, perhaps more than in any other area, designers are confronted by such rapid changes in use patterns and technological developments, that it has become difficult for them to offer clients consistently up-to-date solutions to their problems.

In the past decade, as the real impact of the new technology has been felt, completely new factors have begun to govern office design. Automation, the need to conserve energy, the growth of office democracy have now to be considered alongside new forms of building patronage and financing.

Architects and surveyors are beginning to provide new kinds of service, often forming conglomerate design groups with office planning experts and economists to provide an office design package deal. Architects and developers sometimes adopt another approach — they simply design the shell with no fitting out — rent adjustments follow the scale of furnishing and fitting that is adopted or needed by the client.

Funding, naturally, has an important influence on design, particularly for offices built as a speculation—long-term design performance being essential for projects funded by institutional investment.

The custom-built office building is still a comparatively rare phenomenon—but it is often in this field that design innovations are initiated.

Office clients are today more demanding of their consultants—both sides have more technology at their disposal. It is in this area of office furniture, equipment and systems that rationalisation is slow — and where all these separate elements meet the architecture problems can occur.

> 'The custom-built office building is still a comparatively rare phenomenon—but it is often in this field that design innovations are initiated.'

Assessing the impact of the new technology has led to the setting up of client/user studies which will need to be constantly monitored because of the rapid obsolesence of some office systems. It is in the overlap areas — between the office worker's immediate "work station" and the total office building environment that the architect and surveyor play an important role. Lighting and energy conservation are two such vital areas.

While the rapid changes of technology may necessitate the restructuring of the traditional design teams, the area of consultation with the individual office workers has also to be improved and changed. Professional designers, whether they are architects or surveyors, need to speak more freely with the people for whom they are ostensibly designing.

Office managers can learn a great deal about simple design problems by monitoring the reactions and comments of the individual desk worker. It is the girl on the VDU who can tell the designer how she feels about the light levels.

A recent picture of a cheque-clearing section of a major bank—showing lines of female office workers, sitting at parallel rows of computer screens—looked like an Industrial Revolution view of girls at the looms.

It is true that some office conditions are more comfortable than ever, but the nature of much of the work which is only partly automated, can be unbelievably tedious.

It is factors like these that designers have to consider. In the end, the comfort of employees has a great deal to do with their efficiency. Close collaboration with them at an early stage in the design process should be a priority.

Energy is one of the most important considerations for the designer and the service engineers and there is no doubt that energy conservation is leading to generic changes in building form. With the commercial office market no longer at its most buoyant, there are major attractions in reducing running costs—low energy usage has already become a major selling point in the U.S. office market, for example.

In the UK an experimental office building has been designed by the Building Research Establishment and the PSA (Public Services Agency of the Department of the Environment) to make the greatest use of ambient energy for lighting and heating.

They have succeeded in producing a building where the fabric and services are integrated—producing offices without air-conditioning. It is a low slab block, three storeys with small offices opening off an east-west corridor.

Insulation is good on a medium weight concrete frame building with concrete cladding and floors. Double glazed windows and motorised blinds on south facing windows allow for both insulation and shade. The office block is glazed for 45 per cent of the south-facing external wall and 30 per cent of the north.

Inside, the lighting runs parallel to the windows and is controlled by a photo electric cell.

This means that artificial light levels cannot be altered until daylight falls below preset levels. Heating in the winter is by solar gain supported by perimeter radiators, some heat is also reclaimed from ventilation air. The result of this experimental building to date show that energy-savings can be considerable. while initial results show that it is possible to save up to 50 per cent of the energy that would be used in a "conventional office block of similar size."

This is certainly an area where the architect and the designer can play crucial roles in designing the kind of framework that will prove to be a long-term economy. This is an added attraction if it can be combined with flexibility of layout and internal office design.

Another pilot project that will provide useful information for the "office of the future" is the automated office experiment being conducted by the Greater London Council, Scientific Branch, and the manufacturers of office equipment, Rank Xerox.

A definition of information technology might be the convergence of computing and communications. For the offices of the future this will mean the use of word processors, electronic mail, technical graphics, access points to local and national data bases and teleconferencing facilities.

To service a staff of 140 who provide London with a consultant scientific service for areas such as waste disposal, air pollution, fire and safety, a system of workstations based on the Xerox 8000 system has been installed.

It is, broadly, a network of word and graphic processing stations, with centralised filing and high speed printing. All the work stations are connected to each other and to the typing pool.

Central filing is also available, but this will mean the reference material in use before the system being typed into it.

In time, the workstations will all be connected to the GLC mainframe IBM computer—this will allow access to all the data needed to produce the most complicated of reports. Some 512 metres of Ethernet cable had to be installed at County Hall, this was a task that was done by ordinary cabling contractors.

The effect on the staff, who were trained for four or five days to operate the word processors, has been that they spend more time at machines but the feeling, at least for these trained scientists has been that the work environment is more congenial.

The GLC unit is a demonstration unit and is available for inspection by appointment. The Cabinet Office information technology unit, and several local and national authorities, are taking part in demonstration projects under the Department of Industry umbrella.

> 'The comfort of employees has a great deal to do with their efficiency. Close collaboration with them at an early stage in the design process should be a priority.'

The impact of the new technology on new and old buildings will largely be one of character. The newest type of office building that is adapted for the latest technology will still need further change in ten years' time, if not sooner.

Inertia and cost are the only two factors that come between the designer and the complete office revolution. Buildings will always be needed to shelter the technology, but the advent of radio-based operational systems, free from wiring, will make equipment more mobile and necessitate the totally flexible building.

The tendency to build "combination" buildings that comprise the offices, research and development facilities of a company, looks like the way of the future. This is the interesting experimental area that cuts across all preconceived ideas of the planning controls and the funding institutions. The future looks bright, but we may not all recognise it now.

The newly integrated offices of Burroughs Europe-Africa Marketing, Uxbridge, which have been designed and furnished by Westinghouse utilising the Open Office System. Westinghouse Furnishing Systems, a division of Westinghouse Electric Corporation, took top honours at this year's Neocon 15, a major business equipment show held annually in Chicago, for excellence in large showroom design in a judging co-sponsored by the American Society of Interior Designers and Interior Design Magazine

Lord Chalfont: He will be chairman at the IBS seminar on computer applications

Seminar for business leaders

WHILE MANY business leaders in Britain accept the fact that computers can be a vital aid to productivity, they nevertheless have difficulty in seeing how computers apply to their own businesses.

Accordingly, the Institute of Directors is arranging a special briefing during the forthcoming International Business Show at the National Exhibition Centre, near Birmingham. The briefing, on Thursday, October 20, at the Birmingham Metropole Hotel, within the NEC complex, will provide guidance on:—

- Understanding computer-based technology.
- How to apply the new technologies to your own business.
- How customers can be won and held through improved performance.
- How staff support for the introduction of new technologies can be secured.

The chairman for the event will be Lord Chalfont. Other speakers will include:—

Mr John Butcher, MP, Under-Secretary of State, Department of Trade and Industry; Dr Hermann Hauser, joint managing director, Acorn Computers; Mr Robert Knighton, manager, systems and methods, Abbey National Building Society; Mr Walter Goldsmith, director-general, Institute of Directors; Mr Roy Axe, director of design, Austin Rover group; Dr Stephen Castell, author of "The Computer Bluff" — a Which Computer Publication.

M.W.

Many of Britain's office buildings require major refurbishment

Integrating the old and the new

Office building renovation

COLIN AMERY

ADVANCES IN office technology and energy-saving have changed the nature of the traditional conversion of an old building into commercial offices.

The standard approach of suspended ceilings, overhead lighting, floor or skirting trunking for services and the ubiquitous fitted carpet is now incompatible with new ways of handling office technology. Shop units are always let as shells, so why not adopt this approach to the office?

It is the arrival of new office machinery in large numbers which calls for a new strategy towards the conversion of office buildings. There are also simple technical hazards: for example, an electronic workstation may produce as much heat as a small electric fire—therefore air-conditioning is going to be needed as soon as a few hundred machines are installed.

Should the warm air be extracted via the ceiling or the floor? Office furniture is now available with built-in ducts—it works rather like the air-cooling system on a car dashboard.

Lighting

In the area of lighting, reflections in the VDU screen have to be avoided and so offices, new or converted, are better if supplied with a general artificial light reflected downwards from the ceiling.

Noise levels are another constant concern of designers—printers and plotters sometimes have to be isolated, for example.

Flexibility is the cry from both designers and the funding institutions — partly because no one can predict all the needs of the so-called "office of the future."

What is only too clear is that the building stock of the 1960s and 1970s is already redundant and in need of major refurbishment. Ceiling heights, for example, are often too low, air-conditioning is inadequate and energy-saving is often an unconsidered factor. "Long life and loose fit" was the cry of some in the 1960s — they were right, but few heeded them.

Sir Clive Sinclair's achievements in the field of electronics at his Cambridge works are well known—the building itself less so.

Surprisingly, it is a conversion. The building stands in a Victorian side street in Cambridge, and is a converted mineral water factory.

This centre for new technology follows a Cambridge pattern of using older buildings in the town, rather than moving out to smoothly designed purpose-built headquarters on green field sites.

The original old building was an L-shaped block, with a narrow yard between it and a range of outbuildings. The L-shaped block, with its brick banding, has been restored by the architects, Lyster, Grillet and Harding. They have emphasised its Victorian solidity. The yard has been glazed over making an entrance, display and reception area while also linking the former outbuildings to the main offices.

The old building makes a good venue for research laboratories, with plenty of natural light on both sides of the narrow rooms. On the first floor, north-facing roof lights give excellent illumination.

Thermal insulation has been upgraded through out the old premises by the dry lining of masonry walls and the insulation of the roof. Well water (once used by the mineral water factory; the water is at 12 degrees centigrade throughout the year) is now used as a source of energy towards the heating of the building, allowing a cheaper use of off-peak electricity.

Lighting is linked to the computer system that controls the heating — thus making for further economies.

The success of this conversion is that the plain and strong Victorian industrial building has provided an unobtrusive background for the new services. The design of the new spaces is simple, too, and the most advanced high-technology business functions superbly in a careful conversion.

In another example, an insurance company in Holland, the Centraal Beheer in Apeldoorn, ten years ago completed what was then widely regarded as an advanced office building by the Dutch architect, Herman Hertzberger.

He provided top-lit, corner-lit cascades of open office cells that somehow seemed to offer a way out of the montony of the open plan office.

The same company, now expanding, has decided to reverse the usual procedure and convert an industrial shed into the next phase of their offices.

This big space, belonging formerly to Philips Electrical Industries, has been divided into cells by the imposition of an overhead servicing network, based on inverted "mushrooms" which hang from the ceiling.

These curious-looking, but efficient objects, provide for the clusters of workers below all the services—air, light, telephone, power and computer cabling. These installations have an almost infinite capacity and make it possible to set up a well-serviced office in almost any kind of building.

Challenge

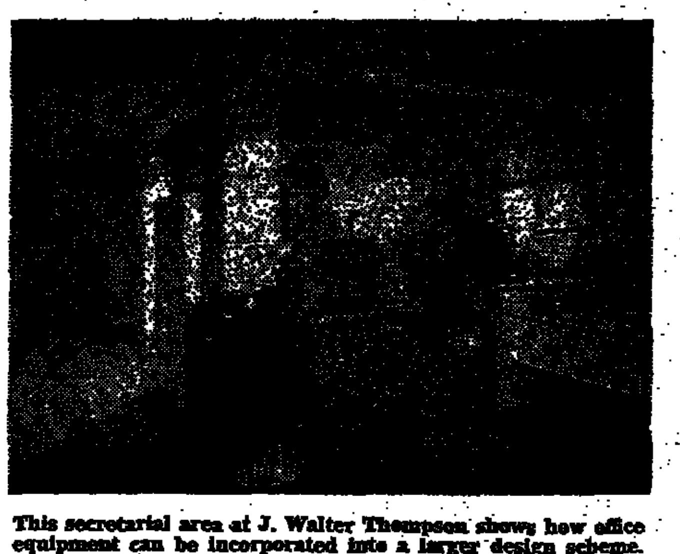
In servicing, planning and economic terms, this scheme has lots of potential but it doesn't look very attractive—this is where the challenge for designers is most evident.

In yet another example, in London, a corner of the City which is fast improving—Clerkenwell's Britton Street—the architects, Yorke Rosenberg and Mardall, has shown how new and old buildings can successfully blend together.

Re-using a classical facade (which was a 1901 gin warehouse and distillery) as the entrance way to the new building, YRM has provided an impressive architectural experience. Between this old building which, at the request of the council, was turned into flats, is an attractive courtyard.

The offices themselves are a large pavilion block on a change of level in the site, allowing for servicing and parking below. Clad in a fine, red panel, the new building is a bold and confident assertion that it is possible to mix old and new.

The architects use the offices themselves and they are a standard, well detailed example of this distinguished firm's work.



This secretarial area at J. Walter Thompson shows how office equipment can be incorporated into a larger design scheme. Filing and storage units work with the structural elements of the building to define the area and make the best use of available space. The long-running refurbishment of the advertising agency's Berkeley Square offices is now complete. Planning, design and contract management were carried out by Space Planning Services of Hillingdon, while the building was fully occupied

Also in the City of London is a remarkable renovation of a major office building of the early 1930s: Unilever House, on the Thames Embankment.

The building looks like a standard, dignified 'thirties classical building. The architect and designer, Theo Crosby of Pentagram, has responded most imaginatively to the decision to add and expand without a major gutting of the old building.

By moving the main entrance and creating a new one on the South side, and by adding windows and space to the top storeys, Crosby has expanded within the existing shell.

But his major triumph has been the creation of a stunning Art Deco entrance hall that is new, but still in tune with the spirit of the building.

Although the refurbishment of Unilever House was done within a strict budget and achieving modern office standards, it manages to introduce a decorative and colourful note into the working environment—an aspect so often sadly lacking.

OFFICE EQUIPPING AND FURNISHING V

How a walk-through diagnosis by experts can cut costs and increase office productivity

No easy answers in quest for greater efficiency

Better office utilisation

MICHAEL WILTSHIRE

SEVERAL new and unfamiliar terms have started to circulate among office designers and researchers: building utilisation, office audit or appraisal, post-occupancy evaluation, total building performance.

These reflect a movement towards taking stock of those extremely expensive commodities called offices, and doing it in a way which takes account of how all the components of the office building, services, space, equipment, furniture and people work together.

The main influences steering this movement are rising office costs, a drive for increased productivity, energy, and information technology, comments Dr Peter Ellis, of Building Use Studies, London.

In the case of energy, attempts to seal office buildings against heat loss have led to the so-called "tight building syndrome." The proportion of re-circulated air in an air-conditioned building is markedly increased, raising the probability of that air becoming contaminated with the growing number of toxins given off by building materials, furnishings and equipment.

In Canada, these problems have become chronic. Some large office buildings have been declared uninhabitable due to the high incidence of respiratory problems and virus infections among staff.

The human problems were unanticipated consequences of a Canadian Government programme to conserve energy in public buildings. This has now developed into a much broader programme of evaluating whole buildings by diagnostic methods drawn from all the disciplines involved.

Dr Peter Ellis says that many organisations are not yet seeing the improvements in office productivity which the technologists have led them to expect. The cause of this low productivity is not the fault of the equipment itself but is a complex combination of many factors

Solving problems by the team approach

Engineers, toxicologists, air and noise quality engineers, occupational health scientists and psychologists work in "transdisciplinary" teams to attack problems which any one discipline on its own cannot hope to solve.

Early in September they brought their message to Britain, at a conference on "Building Utilisation" organised by the Portsmouth Polytechnic School of Architecture.

Dr Ellis says the UK response has been sympathetic, particularly from designers and researchers working on the problems of adapting office buildings to the needs of information technology.

The recently published Orbit report (Office Research on Buildings and Information Technology), produced jointly by architects Duffy, Eley, Giffone, Worthington, technology consultants EOSYS, and design researchers, Building Use Studies, draws similar conclusions about the need to evaluate whole buildings.

Advanced office automation makes an impact on building construction, services for power, air conditioning, data transmission and lighting, space planning and people. Effective utilisation of the equipment requires collective planning in all these areas, and collective evaluation to identify and solve problems and learn for the future.

The ORBIT study pointed to the economic costs of adapting unsuitable buildings to the needs of office automation.

In some cases the refurbishment costs of modifying space and services may exceed the cost of pulling down a bad building and erecting a suitable one.

Dr Ellis says that building owners and managers are beginning to take up a new service of office *building appraisal* to assess the adaptability to advanced information technology of a new building before it is acquired, or to evaluate their existing building stock.

"The organisational and human costs of maladaptation to office technology have received less attention," says Dr Ellis. "But many organisations are not realising the improvements in office productivity which the technologists have led them to expect.

This is often through no fault of the equipment itself. The cause of low productivity lies in some combination of the three linked components of the office—people, environment and technology.

As they affect staff, office technology problems fall into three categories—jobs, health and safety, and ergonomics.

Many office workers are suspicious or hostile to changes in technology, often justifiably. Apart from the threat of redundancy, there is the fear that jobs will be de-skilled, control and supervision handed over to machines.

Research is showing that training, job design and staff involvement in the introduction of automation are essential to prevent maladaptation and poor utilisation.

Health, as in the case of air quality, is a growing issue. VDU's are being blamed for a range of ills, including back and neck aches, eyestrain, headaches and nausea.

Pregnant women may be specially at risk from the long-term effects of exposure to low-level radiation emitted by cathode ray tubes. Scientists have not been able to explain high incidences of miscarriages and birth defects among pregnant VDU operators in the United States and Canada.

Ergonomic problems result from bad design and lack of adjustment in equipment and furniture, and from lighting which creates glare and excessive contrast for screen users. Noise from printers and other equipment has been shown to cause stress.

In open offices, lack of privacy and control over ambient conditions are more likely in the automated office to combine with other stress factors in reducing the individual's work capacity in air-conditioned offices, poor air quality will further exacerbate the problem.

All this is very costly to an organisation's heavy investments in staff, equipment, furniture and buildings. Days lost in illness or absenteeism must be counted alongside low individual productivity and failure to realise the organisational potential of office automation.

Furthermore, employers may soon have to take account of new standards and regulations for health and safety, and more demanding technology agreements with trade unions. This has already happened in Scandinavian countries.

A collective 'scan' pin-points problems

● **Walk-through diagnosis:**

The solutions to these problems are not easy to find by conventional methods. Often the symptons do not reveal the underlying problem. Staff headaches may stem from a variety of causes. Low productivity may be traceable to poor training, job stress, or ambient conditions.

Diagnosis requires the combined skills of several professional disciplines. The Orbit team consultants now offer this kind of diagnostic scan in working offices.

Dr Ellis explains: "The idea is that a small group of experts, perhaps a psychologist, a technologist and a space planner, conduct a 'walk-through' of an office, exchanging and cross-fertilising ideas as they go.

"This collective 'scan' is often enough to pin down the cause of a problem, in a way which extensive investigations by individual experts in their own disciplines could not."

The method saves the client the enormous cost of making a wrong diagnosis himself then commissioning an entirely wasted consultancy effort by experts from the wrong discipline.

"Is it too extreme to imagine that offices be given a regular annual check-up, to make sure that they are fit and functioning?" he asks. "It might save an awful lot of trouble."

Building audits can achieve substantial cost savings for occupiers. CE Planning, for example, prepares a report that sets out specific recommendations for action. It will identify ways of improving environments and therefore productivity and can quantify potential savings for years to come. As rents and rates increase, so the savings also increase.

The cost of an audit is based on the area to be reviewed. It would not be more than 15p per square foot and could be as little as 10p per square foot. In London this is equivalent to less than four hours' rent.

In one Building Audit, 10 per cent of the office space was handed back to the landlord. Around £100,000 a year was saved and the building audit cost only £2,500.

Space Planning Services offers a management programme which is, in effect, a twice-yearly space audit—a survey of how well (or how inefficiently) clients are using their offices. The intention is to highlight problems of wasted circulation, uneven density and storage, in much the same way as a company's financial resources are scrutinised.

A number of leading office furniture suppliers have also made studies to determine the level of increased productivity when office working conditions are improved.

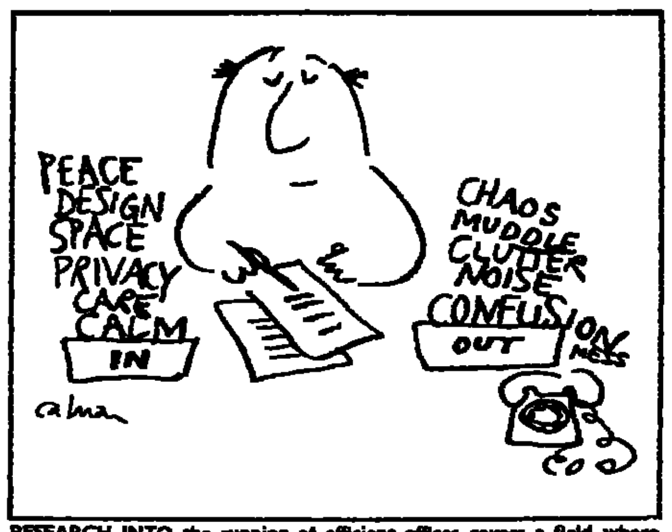
For example, in an independent study for Westinghouse of "before-and-after" monitoring showed how the installation of its "Open Office System" furnishing components, tailored to the clerical and repetitive nature of the job function, produced a dramatic improvement in worker productivity and morale.

More details from Building Use Studies, 8-9, Bulstrode Place, Marylebone Lane, London W1M 5FW. Tel.: 01-486 9281.

● *CE Planning, space audits: 4, Cromwell Place, London SW7 2JJ.*

● *Roger Henderson, Space Planning Services: Western House, Uxbridge Road, Hillingdon, Middlesex WB10 0LY.*

● *Westinghouse Office Systems: 12-16, Fitzroy Street, London W1P 5AJ.*

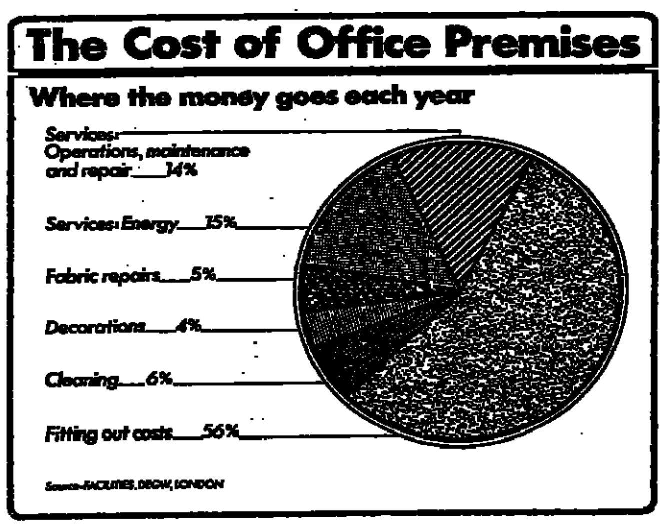


RESEARCH INTO the running of efficient offices covers a field where a number of sciences and human studies richly intersect: architecture, economics, technology, engineering design, property management, businessmen management and education.

Herman Miller, the office furniture manufacturer, has produced a sophisticated little book, aimed at the sector businessman, entitled "Are your offices stealing company money?"

Commenting on the importance of the need for a mixture and privacy in offices, the company's research shows that 90 per cent of office workers said that they could do with fewer people in their working area. But practically none gave the Greta Garbo answer that they wanted to be alone. On the contrary, 70 per cent of them said they wanted some contact with other people—and not intermittently, but all the time.

● Are your offices stealing Company money?" Forward by Sir Hugh Casson, available from Herman Miller, 149, Tottenham Court Road, London W1P 0JA.



The high cost of cutting corners in maintenance

THE TOTAL cost of building services can be divided into three sections—initial capital costs, energy costs, and operation, maintenance and repair costs.

The cost of operating and maintaining the existing services of a building may or may not be under the direct control of the facilities manager. In an owner-occupied building the maintenance team, either direct labour or contracted, would be responsible to him.

If the building were leased, however, then it could well be that the landlord would retain ultimate control over the running of the main services, passing this on to the tenant as a service charge.

Dr Francis Duffy, editor in chief of "Facilities," a monthly digest for the building administration manager, says that in today's economic climate there is a strong temptation to cut corners in the maintenance budget. This is perfectly understandable but must be resisted—the sophisticated and highly-tuned services of today's buildings are dependent on regular servicing.

If apparent savings are made they will be more than offset by reduced efficiency—leading to higher energy costs — increased incidence of breakdowns—causing disruption to the organisation—and a reduction in the life of plant and machinery. Contrast the relative complexity of a car and a business organisation—and multiply accordingly the inconvenience you suffer for a missed service.

It costs more to operate and maintain an air-conditioned office. A full air-conditioning system has far more plant—boilers, cooling towers, refrigeration machinery, air handling plant, filters—than a heating system, which just has the boilers to service.

"Facilities" is available from DEGW, 8-9 Bulstrade Place, Marylebone Lane, London WIM 5FW.

OFFICE EQUIPPING AND FURNISHING VI

Mr Jack Lucas, marketing director of Lucas furniture systems

Lucas Programme 2 at the Trade Development Bank: Workstations are grouped in varying configurations, with computer terminals accommodated on turntable units for shared facilities, or on machine tables for single operator use

Mr Bob Denton of Vickers: ready for expansion

£6m investment by Vickers Furniture

MR BOB DENTON, Vickers Furniture's managing director, says that his company's manufacturing policy is to create a capability which will increasingly respond to the expanding systems furniture market and accommodate today's ever-changing technology.

To achieve this, Vickers anticipate spending £6 million on some of the most sophisticated plant and machinery available on the world market.

Already, Vickers has in production a Salvagnini S4 and P4 and two Amadas. These machines facilitate computer numerical control to minimise set-up and changeover times, allowing for more flexibility than traditional manufacturing methods and accommodating the increasing demand for the variety of components required to complete the systems furniture of today.

On capital investment the new machinery is demonstrating an approximate pay-back period of under three years and is also making a significant contribution to reducing the proportion of working capital to turnover.

Since 1981 Vickers Furniture's turnover per person employed has increased from £16,500 to £24,000.

Mr Bob Denton is particularly proud of this achievement and says "there aren't many companies in today's recessionary Britain that can boast that sort of progression through some very difficult times."

MICHAEL WILTSHIRE

Revitalised market is 'all set to take off' in 1984

Furnishing sector

MICHAEL WILTSHIRE

THE fiercely-competitive market for office systems furniture is expected to grow by at least 18 to 20 per cent in Britain next year.

This is the view of industry specialist Mr Gautam Barua, director of the National Busines Equipment Survey (NBES).

Unlike the market for copiers and word-processors, the demand for office furniture is essentially cyclical in nature. By next year, says Mr Barua, "the office furniture market will really take off."

Companies have been postponing furniture purchases because of the recession. With a more favourable economic climate in 1984, companies will be prepared to spend on their environments once again, he adds.

Annual studies by NBES on the UK office furniture market indicate a strong correlation between economic recovery and a rise in the demand for furniture.

The UK office-furniture industry has been warding off the spectre of a major market shake-out for so long now that it has almost learned how to live with it. And, in the process, it has found a way of riding on the crest of the technology wave that is enabling suppliers at least to keep the ghost at bay.

But manufacturers still tend to speak in tones that betray an element of quiet incredulity when they contemplate the number of suppliers, national and international, now pushing for a market-share in Britain. For in systems furniture alone—commonly considered the top-end of the market—there are at least 50 companies fighting it out in a depressed economy.

"The British market is clearly over-supplied for its size," comments Mr John Bristow, head of the UK marketing operation for the world's largest manufacturer of office-furniture, Steelcase Strafor.

New approach

"Go back 15 years, and the British office furniture market was dominated by the home-based industry. When the foreign manufacturers came to Britain they brought with them a new approach to product development and customer relations—areas which had largely been neglected by the local UK suppliers," he says.

In the past, British manufacturers have been the victims of the small size of their own home-market, which inevitably put a damper on the finance available for investment, whereas overseas competitors had benefitted by having both the money and the initiative to do all the right things, demonstrating a new level of responsibility to both customers and product, and pouring funds into new plant and high-technology production facilities, comments Mr Bristow.

The effect cf foreign competition on the home industry has been, in the main, revitalising. Although not quite an overnight transformation, office furniture suppliers suddenly recognised a new, expanded role. They were no longer simply purveyors of four-drawer filing cabinets, but creaters of complete environments, from the lighting through to the coathook on the back of the chairman's door.

Furniture has become a cost-efficient tool to raise human productivity and comfort and the industry has developed its own science of ergonomics, with the accompanying jargon.

In short, the change from a locally-serviced market-place to the present highly-competitive international forum has helped to revolutionise the sophistication of the product and, along with it, the sales psychology and to a lesser degree, the marketing techniques.

But while it is true that foreign-inspired competition has succeeded in taking away a hefty slice of the UK turnover from the home-based industry, the speed with which British manufacturers have responded to the situation has taken the wind out of the sails of importers who had anticipated that it would take considerably longer for the UK producers to come up with serious competition.

British companies such as Hille, Project, Lucas, President and G. A. Harvey, finding themselves in an almost David-and-Goliath situation in terms of financial muscle and resources, have responded to the challenge presented by innovative foreign multinationals to such good effect that even they themselves confess to a little quiet surprise. The result of foreign inroads has been not to decimate the home industry, but to give it an apparent kiss-of-life—albeit, a revival in which some British sections are still struggling for assured survival.

"The influx of foreign competitors has stimulated the home industry, forcing us to reappraise our whole approach," says Mr Ray Slinn, divisional manager for G. A. Harvey, a recent British entry into the systems market.

Office furniture must have the ability to cope with tomorrow's technology, says Mr Tony Warner, international sales director of Westinghouse Furniture Systems. He places a strong emphasis on product design, flexibility and after-sales service—"relationships with clients must be long-term."

Westinghouse is linking-up with the German company, Klober, to distribute the Dactylo seating range in the U.S., Canada and the UK.

Leasing office furniture is likely to be a very attractive option in the years to come, says Mr Neville Osrin, marketing manager for the international division of Steelcase Strafor, the world's largest office furniture company.

Steelcase, which has just had its busiest-ever year in the UK, has launched its "Transact 9000" range of components of special interest to the banking sector and service industries.

"Harvey has responded in the height of a recession by investing in a major design and development programme to launch the George Harvey systems range."

While Mr Slinn describes the market for systems furniture as a crowded one, he argues that any shake-out that is occurring is not on a major scale.

"Newcomers are rapidly making up for those companies falling by the wayside," he adds. "The same basic companies will probably still be operating in the UK market in ten years time."

The major multinational furniture manufacturers will always have facilities to secure the really large-scale contracts that crop up from time to time in Britain. Success for the home industry will be largely linked to the degree to which individual companies carve out their own special niche in the marketplace.

Harvey sees its own ability to design and tune furniture to the individual client's specific needs as a major element in the company's plans for growth over the next five years.

"International manufacturers prefer to offer a 'global' product while Harvey has the advantage of extensive manufacturing facilities to make client flexibility an integral part of our company approach," explains Mr Slinn.

Other suppliers agree that, despite the depressing effect of the recession on the total UK market for office-furniture, there will be no mass insolvencies.

Mr Neville Osrin, marketing manager for Steelcase Strafor, sees little likelihood of the major manufacturers and suppliers disappearing from the UK scene, although smaller companies could experience serious difficulties.

"While the UK continues in its conservative approach to change in administrative environments, no manufacturer can hope to arrive on the scene and, in two years, become a market leader.

"In the present climate it is difficult to achieve large turnover in a short space of time. But one thing is sure, there's no pot of gold at the end of the UK rainbow."

The latest launch from Steelcase Strafor typifies the current application-orientated approach now adopted by companies to the marketing of office furniture.

Designed with a specific context and market segment in mind, "Transact 9000," is a range of components which integrate with other Steelcase Strafor products. It is primarily intended for use in the service industries, such as the banking and travel agency sectors, for wherever company and clients meet together, either to carry out transactions or communicate face-to-face.

Not all suppliers expect the UK office furniture market to continue to support the large number of companies presently operating within it.

Mr Tom Rosewall, international director for Westinghouse Furniture Systems, takes a less sanguine view of the chances of company survival, in general: "If the present economic state continues, a fall-out will take place. If it improves, the increase in available business will help more companies to remain viable."

Mr Rosewall contends that though there is no actual shake-out of companies as yet, a subtle shift has taken place within the architectural and design communities' perception of those furniture suppliers qualifying for their attention. In other words, a "perceived" shakeout.

"But," says Mr Rosewall, "the one factor that seems guaranteed to cause a real shake-out in the industry is the rise of the entrepreneur — when it happens.

"Historically, dealers haven't been active in the UK systems market, so the extent of their role has remained questionable. But when the entrepreneurs start chasing the suppliers, instead of the suppliers chasing dealers, then it's the entrepreneurs' actions as a response to customers' demands which will decide exactly those systems that will sell, and these that will go to the wall.

"But right now what suppliers and the design community must concentrate on, is staying in tune with one another and the end-user. I surely hope we do — because, that way, everyone ends up a winner!"

Staying in tune with the market-place for companies which want to go on surviving means an increased emphasis on the service aspect of company operations, now that industry standards have been generally revised upwards and in effect, all systems can claim to achieve the same basic end for the client, ie, save space and boost office productivity.

"The trend within the industry is clearly towards becoming increasingly pre-occupied with the service angle of operations," comments Ms Jean Davis, who has made a study of the furniture industry for the marketing research specialists, the National Business Equipment Survey.

"The quality of service offered is undoubtedly going to become a more important part of company sales advantages in the future. It may well prove the route to company prosperity in the next five years, as opposed to mere survival," she adds.

The NBES organisation is now researching the opinions of architects, designers and specifiers involved in office design in the UK in a project designed to monitor their current perception of products and services offered by the major office furniture suppliers, with a view to strategic assessment of future needs.

More details from the National Business Equipment Survey, 71, Quickswood, London NW3 3RT. Tel: 01-586 0403.

Leading systems manufacturers intensify research

Many new ranges available

Making the right choice

JEAN SHERIDAN

HOW TO USE furniture has not been a subject on which one would expect the manufacturer to know much more than the user.

However, over the past 10 years the subject has joined the space age, and the developments in office furniture have been led by the manufacturer and the designer. They have been constantly ahead in creating offices to meet needs, and still are as new and modified ranges continue to appear.

The old furnishing systems of counting heads, and dividing the categories of staff into desks and chairs no longer provides an office which functions, nor a good working environment.

What it does produce is a maze of trip-wires and wasted time.

Virtually every leading range of office furniture has been re-designed or extended this year to help companies cope with new methods of working created by the increasing amount of electronic equipment. The manufacturers have been way ahead in responding to what is required, even though business may not yet have discovered the gaps in their office management.

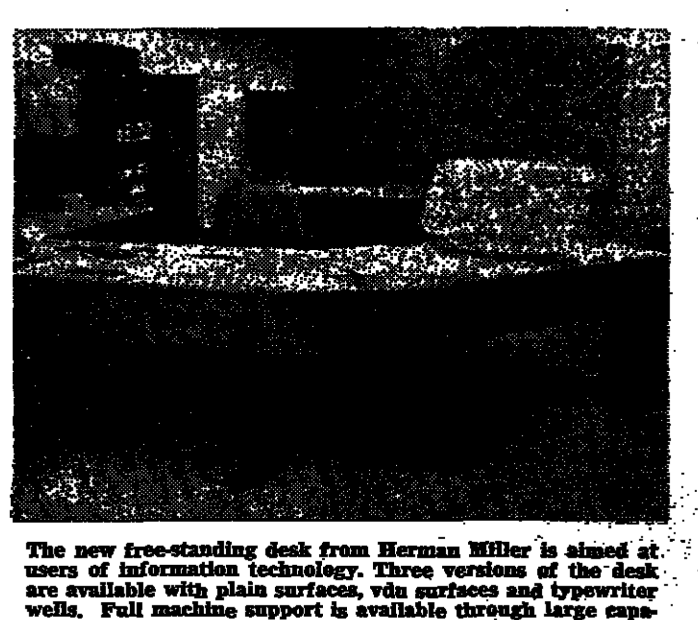
Top manufacturers carry out a great deal of research into office management, and of course, use their own ranges in their own offices. Consider, for example, Herman Miller, because they are said to have 30 per cent of the systems market in the UK. Herman Miller invented system furniture and launched it at the end of the '60s in the U.S., and introduced it to Britain in 1970.

The company has considered it necessary to add to their comprehensive Action Office system.

Partitioning

It is already a wall-hung system offering considerable privacy. Herman Miller has now added full height partitioning to provide extra privacy, and security, and a free-standing desk with full wire management. The company has also moved into the new colours and textures for today's office.

As inventors of what was considered an almost complete system, their additions are significant. They facilitate more privacy to be achieved where needed in open plan systems, the addition of a free standing desk to a wall hung system points up the need for this choice and the 57 new colours, seven new fabrics and three new finishes highlights the demand for a more personal environment in offices.



The new free-standing desk from Herman Miller is aimed at users of information technology. Three versions of the desk are available with plain surfaces, vdu surfaces and typewriter wells. Full machine support is available through large capacity socket bays and a built-in wire management system. The company is also introducing a new full-height wall partitioning system which gives both the privacy of purpose-built walls and the flexibility derived from open plan offices

These are the three biggest changes in all systems of furniture, and perhaps the most widespread has been the introduction of free-standing desks to systems, or where there were ranges of free standing desks to introduce wire management into them. This means they can be used without wiring problems, or without being associated with screens, which have customarily been used to carry trunking.

A well-known British system, the Hille System, has been in a constant state of development, and now offers wall hung and free-standing furnishings, all with wire management, built-in lighting, and a wide number of design options to create personality effects, within the system.

There are over a thousand options in this system where the aim has been to provide an efficient and pleasant office environment. There is a preference for surfaces of wood and textiles, both of which are sympathetic and well demonstrated in the best systems such as Herman Miller, Hille, Carson, Lucas, to name a few.

Carson has become aware of the big market for free-standing desking, and has added wire management to their Link 900 desks.

Previously, their wire management was incorporated in the screens, but now with the wider choice, there is far freater flexibility. All leading ranges offer desking to accommodate vdu's and other electronic equipment. The Carson is considered a mid-market range, less complicated than many of the systems.

Michael Carson launched a system in 1982, called Office Kit, which offers full height partitioning, that will take screen hung components, and there is a supporting range of furniture for desk top computers and other equipment. It is a relatively inexpensive system designed to meet the kind of demand he considers there will be from the UK market.

In all these systems the hand of the designer, reaching out to meet predicted market needs, is very evident.

Another company well known for design orientation is Lucas who have been producing office systems since the early 'seventies. This year they launched their latest system, called Programme 2, which was designed for the new technology and its need for cable and wire management. It was developed in close collaboration with clients such as British Telecom, the CEGB, and ICL.

Alan Cooper has also been concentrating on wire management, of which the company has a new range. At IBS they will be showing a computer workstation with wire management which complies with the new British Standard safety specifications. In their new range of Cantilever and Contour Panel End, which is in light oak, wire management is in the leg frame.

There is no doubt that light oak has emerged as the most popular material for office furniture.

Project, which is the UK's largest manufacturer of wooden office furniture, has launched a new range of computer-related furniture to match its oak Project 4000 range.

Planning

The modules have been designed to fit most sizes of micro-computers, vdu units and word processors on the market.

Enviroplan, who offer the comprehensive Matrix wall-hung system, are part of the large Project Group.

Flexiform has also developed an extensive range of computer-related products, with the emphasis on filing, which complements their Flexiburo furniture range. The company offers a survey and planning service to help clients set up the system best suited to store and accommodate their data processing equipment and media.

There is help and equipment from a large number of suppliers to meet the rapidly increasing use of electronic office equipment, from a large number of companies. The Directory to the Furnishing Trade lists more than 150 suppliers of office furniture, ranging from the bottom of the market, to the top.

One way to make a choice is to look over installations carried out by the companies. Local government and official organisations tend to be keen purchasers. Usually, if they install a system it is at least an indication of value for money.

With all these changes in the general office, the top executive suite in rosewoods tends to have remained much the same from such well-known supplier companies as Gordon Russell. New ranges appear in this sector by a number of companies—from Hands of High Wycombe to Isoplan. The only change is that a certain amount of electronic equipment has been working its way into executive offices, and more will follow. The next biggest change looks as though it will be the increasing number of executives who will work from home. Over 12 per cent of companies in a recent survey offer work at home linked to a central computer. It is estimated that the figure will rise to 60 per cent by 1988, with the prospect of computer related furniture for the home office.

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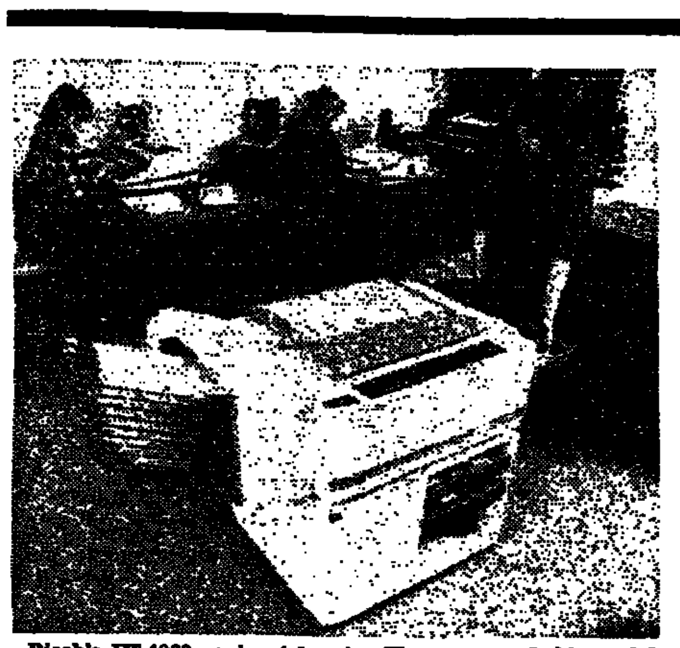


Ricoh's FT 4060 copier (above). The success of this model now means that one is leaving the production line every 24 seconds. Below: Pitney Bowes has launched a new range of plain-paper copiers for medium-to-large business users. The three machines suit companies making between 2,000 and 30,000 copies a month

Big advances in quality and performance

The photocopier market

JOHN DERRICK

EVEN IN the age of microcomputers, the photocopier is still the most expensive single item of equipment in most offices. And with well over 120 machines to choose between, selecting the right model can seem a nightmare.

On the plus side, the buyer can now obtain much more for his money than in the past. Only three years ago, for example, a machine capable of copying onto A3 paper, running at around 30 copies per minute (cpm) with reduction would have cost at least £4,500 and probably more.

Now, however, you can easily buy such a machine for about £2,000 less. Similarly, a good low end A4 copier would then have cost around £1,600 with a discount—now people are buying them for £1,000 or under.

But it is not only the prices that have changed. The actual quality and performance of machines has also improved significantly and there are few bad buys on the market—though some remain.

With the exception of giant machines costing well into five figures, the copier market is heavily dominated by the Japanese. During the first six months of 1983, a total of over 75,000 copiers were imported into Britain.

According to UK Government figures, only 45,730 were from Japan, but the real figure is, in fact, much higher when you take account of the 25,771 machines from EEC countries, since the vast majority of these are, in fact, machines imported from Japan by firms such as Olivetti, Olympia and Triumph-Adler which brand them before shipping them on to the UK; in addition, Canon undertakes a limited amount of assembly in West Germany.

The only company to manufacture in Britain is Rank Xerox, though most of its machines bearing a "Made in the UK" badge are, in fact, only assembled here and some models in its range are imported.

Gestetner has been showing prototypes of a new UK copier for some time, but it looks as though this may never go into production.

Now leading the field in European sales is Canon, which has improved its range considerably over the past two years having had not too brilliant a reputation, previously. Also featuring very strong are Sharp and Mita, the latter have done particularly well since 1980 to emerge from relative obscurity to hold a very respectable share of the European and North American markets (its machines are also sold under a number of other brand names, such as Adler, Imperial, Gestetner, Kardex and Océ).

In 1982, Canon broke new ground with the launch of its so-called "Personal Copiers." Selling at only £550-£750, these became the cheapest plain paper machines and used disposable cartridges in place of certain fixed parts. The catch, however, is that the copy cost on consumables works out at over 3p excluding paper and service, making it uneconomical for anyone making more than around 400 copies a month.

Nonetheless, other manufacturers see great potential at this end of the market and several other Japanese manufacturers are expected to launch similar machines during 1984.

Ricoh ranks in the big three in worldwide sales, but it has only been selling under its own brand name in most parts of the world for a couple of years. Previously it relied exclusively on distribution by Nashua and Kalle Infotec in Europe and Savin in the U.S.A.

Ricoh's reputation was for a long time bedevilled by the use of "wet toner" in its so-called plain paper copiers. This had very significant user drawbacks, the most serious of which was that it made it impossible to produce satisfactory copies on most grades of plain paper. Having for years tried to justify wet toner, Ricoh then decided to switch to the dry toner process when it started selling under its own name in 1981.

Nashua and Kalle Infotec continued to sell the wet toner machines, however, though both now also sell some of Ricoh's dries and have also started supplying the wet machines specially adapted to enable them to copy properly onto ordinary plain paper.

What, however, has become of Xerox, the pioneers of plain paper copying?

In recent years, Xerox watched its share of the office copier market crumble as its machines became increasingly obsolete and over-priced. It failed to innovate and relied to a very large extent on selling reconditioned equipment.

Xerox fights back

Xerox has now staged a partial recovery but it is unlikely ever to win back most of what it lost to the Japanese. Xerox is, indeed, having to rely to an increasing extent on Fuji Xerox, a joint venture between Rank Xerox, which handles Xerox sales for most of the world outside North America, and Fuji.

Xerox's hopes for the future lie in its new 10 Series machines, launched in Europe in the spring. Yet, as *What to Buy for Business* magazine put it: "Previously Xerox was selling machines which were obsolete and overpriced. Now it is just selling machines that are overpriced."

Impressive though the 10 Series is, it still does not rate as particularly good value and Rank Xerox is likely to continue to be uncompetitive until it changes its high cost direct sales methods and starts selling predominantly through dealers, in common with all its major rivals.

Rank Xerox's attempts to trim its overheads have so far failed to allows it to compete fully on price—this is despite appointing a limited number of dealers in rural areas, trimming its headquarters' staff and cutting the workforce at its Gloucestershire factory where assembly of some models for the UK market and some manufacturing takes place.

From the buyer's point of view, the office copier market is full of pitfalls. Quite often dealers charge well over the list price for equipment, relying on the ignorance of many buyers, some sell obsolete machines which have been phased out for replacement by better and normally cheaper models, copy costs vary enormously and have to be watched, rental contracts can contain hidden "catch clauses" and so on. And as *What to Buy* put it in its latest copier report: "At the very least, you will be subjected to the most aggressive, almost hysterical, sales pitches you have ever encountered."

Despite its problems lower down, Rank Xerox retains its number-one slot in the so-called "giant copier" market, though it only faces two rivals, Kodak and IBM, the Japanese having decided to keep out.

This market comprises high performance machines mostly for users making between 25,000 and 250,000 copies a month. With the exception of Xerox's top line 9000 machines, the giant copiers cost in the £20,000-£30,000 range, though most are used on rental.

The giant market is, however, under increasing pressure from much less expensive ordinary office copiers which have begun to rival, if not yet to match, the performance of the giants, but at a fraction of the price. Canon's new NP500, for example, works at 50cpm and costs around £6,500, around a quarter of the price of the Xerox 1075 which runs at 75cpm.

The Canon does not, admittedly, have all the features of the larger machine, and, in particular, it does not have such advanced document handling capabilities, but the price difference is one that should make many potential giant copier buyers pause for thought.

Key considerations for buyers as micro systems surge ahead

Advances in wordprocessing

JOHN DERRICK

THERE ARE two principal ways for the buyer to approach word processing. First, he or she can run an off-the-shelf WP software program, such as WordStar, normally costing a few hundred pounds on almost any microcomputer and attach a daisywheel printer.

Result: a perfectly good powerful up-and-running system costing possibly as little as £2,500, including everything, though more likely between £2,500 and £4,000, the exact price depending, among other things on the speed of the printer.

Alternatively, a buyer could install a special type of computer, purpose-built for word processing, called a "dedicated" WP. These run their own proprietary software and have traditionally only been supplied with WP software, though nowadays most can also run off-the-shelf programs for other applications using the CP/M operating system borrowed from microcomputers.

Leaders in the dedicated market are IBM, with their Displaywriter, Wordplex, AES, Philips, Xerox, CPT, Exxon, Dictaphone, Wang and others (some of whom are also involved in the micro sector).

Significantly, most of the dedicated equipment comes from North America, the Japanese having decided not to become involved in what, for reasons explained here, seems like a declining market.

There are a few British dedicated WP manufacturers, principally Data Recall and Thomas Hill International, though the British presence is much stronger in the microcomputer market. In addition, European manufacturers, such as Triumph Adler and Olivetti, retain a significant market share.

A dedicated WP almost invariably costs more than a micro. Most are well in excess of £5,000 for an up-and-running system, ones with even moderately fast printers normally being over £6,000 and a lot going up to £7,000 to £8,000 and beyond. Yet if one looks at the hardware spec and, despite their higher price, the buyer actually seems to be getting less for his money than with a much cheaper microcomputer-based word processing system.

Dedicated WPs mostly run on 8-bit processors, rather than the more powerful 16-bit varieties used increasingly on micros; they tend to have rather modest floppy disk capacity; hard disks are often not available and, where they are, they carry a hefty premium; and multi-screen expansion is often not possible or, once again, is limited and priced prohibitively.

So why do people think of buying a dedicated? Frankly, the arguments in their favour are diminishing rapidly.

A couple of years ago, microcomputers did not have the hardware specification advantage of dedicated systems in terms of better processors, more disk capacity, expandability, and so on. Moreover, in those days, dedicated WPs scored over micros in terms of the ergonomics.

Problems

The first generation of low-cost business micros had rather tacky hardware, often with nasty keyboards and screens that could only show 40 characters across a line. These might have been suitable, for example, for doing your accounts, but they were not really suitable to give to a secretary.

Now, however, the situation has changed. Micros have surged ahead, while dedicated WPs have more or less stood still. The result: micros now match or beat dedicated WPs on the ergonomics, as well as being more powerful and expandable and offering better hardware spec all round. In fact, it would not be unfair to say that a lot of dedicated WPs are looking rather long in the tooth.

Yet dedicated still have one thing going for them in many cases. The improvements in micro hardware have not yet been matched by changes in their software. The user still receives the same WP programs for his micros as he did two or three years ago.

True, they have been adapted to run on today's more powerful processors, but most are fundamentally unchanged and do not score particularly high on "operator friendliness," in addition to which they cannot always do some of the more advanced things that some dedicated software can handle.

Similarly, dedicated WPs have special word processing keyboards, generally making them easier to use.

So if there is one reason for still considering a dedicated WP, it is to do with "operator friendliness." Whether it is worth paying several thousand pounds extra for this, however, is another matter. There is no doubt that most people choose to take the microcomputer path—sales of even the best-selling dedicated word processors are measured by the hundred, rather than the thousand.

The argument that service and support are better if you deal with a dedicated supplier should be treated with caution, though some micro dealers are, admittedly, poor in this respect—something which showed up strongly in a recent survey of computer users.

It does, in fact, look as though a new generation of easy-to-use WP software for microcomputers will begin to hit the market during 1984, which may well give micros a software advantage over dedicated systems.

The simple answer

The micro puzzle

PHILLIP OPPENHEIM

QUESTION: why do businessmen get so confused when looking at microcomputers?

Answer: because so many of them seem the same. Yet the key to understanding today's micro market is to grasp precisely that fact—many of them are, effectively, the same.

Micro manufacturers, large and small, are increasingly standardising around the identical components, and in particular around a small number of standard processors and operating systems, the two ingredients that are the best indicators to a computers's performance and the software it can run.

All computers have processors that work to one or more operating systems and all software is written to an operating system. Put simply, what this means is that any program written to a particular operating system can run on a computer that uses that system.

Not so long ago, most of the then leading micro supplies had their own proprietary operating systems, often with their own processors. Now, however, most micros conform to one of three standards—Intel's Z-80 processor running on the CP/M operating system, the Intel 8088 and 8086 processors running on CP/M-86 and MS-DOS, and the Motorola 68000 on UNIX.

Thus, for example, micros from IBM, DEC, Sirius, NCR, Commodore, Future Computers, LSI, Xerox and others, all use, or have as an option, the Intel 8088 processor running on CP/M-86 or MS-DOS.

What the buyer has to understand is that there is not normally a great deal to distinguish any two computers using the same processor and operating system, with the result that considerations such as value for money and dealer support assume major importance in deciding what to buy.

The recent What to Buy for Business microcomputer report found that systems which do not conform to one of these standards generally offer much worse value for money than those that do. This is one of the reasons for the decline in the market share of the erstwhile leaders, Apple, Commodore and Tandy, though all of these are now offering standardised operating systems on at least some of their products, normally as options.

Nowadays, most businesses acquiring a micro are advised to go for a 16 bit processor, such as the Intel 8088/8086, rather than a less powerful 8 bit one, such as the Z-80 (the Motorola 68000, known as 16/32 bit, is the most powerful of the standard processors, though it is more than most applications demand).

Low cost 16 bit micros took off in 1982 and the first to hit the UK market was the U.S.-made ACT Sirius, which had the same impact over here as the IBM Personal Computer did in America. IBM was too late coming to the British market to have a major effect and the IBM PC is also over-priced for what is, effectively, a standard issue 8088 micro with a prestige logo.

Big names

The standardisation of components has made it increasingly easy for new manufacturers to enter the market to take on the big names in the industry. ACT, the UK Sirius distributor, is itself entering manufacturing, with a new generation micro, the Apricot, which looks as though it could take a major share of the market in 1984.

A significant proportion of the best buys on the market at present are, in fact, British. Of 40 micros and low end minis rated "good value" or "worth a look" in the latest What to Buy computer report, almost half are British—not bad for a country which, in a more traditional field of office equipment, does not make a single typewriter.

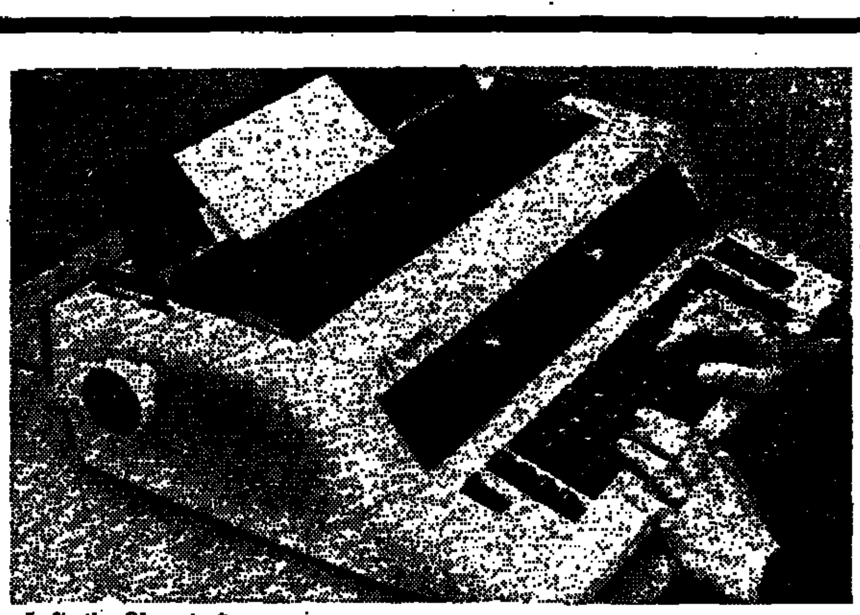
The past year or two has seen major advances in micro hardware. By contrast, the main development during 1984 is likely to be in software, which has tended to fall behind lately.

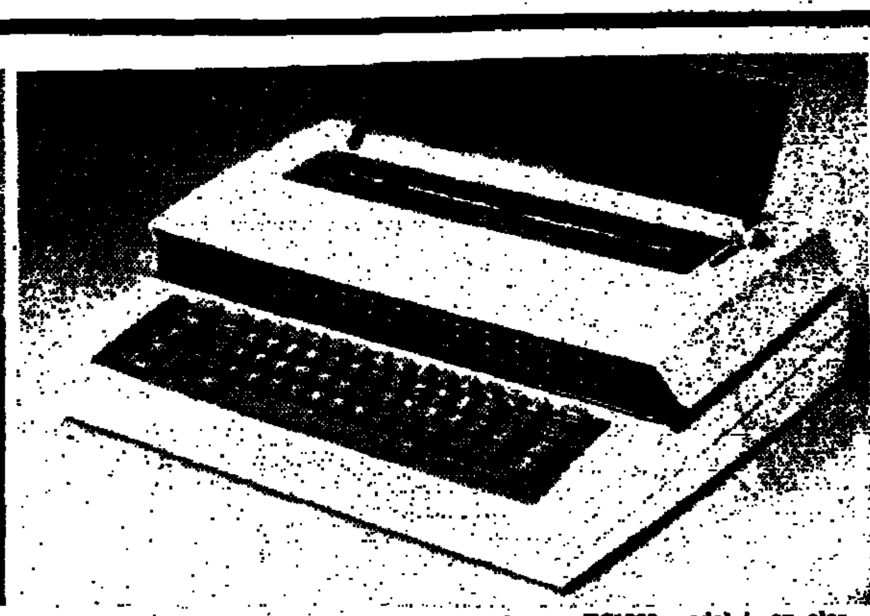
In particular, the market is now seeing the arrival of a new generation of easy to use integrated software packages offering several functions, such as word processing, graphics and forecasting all in one. This should be of major benefit to business users who have in the past had to put up with programs that do not always include "user friendliness" among their attributes.

Why electronic models swept the board

THE TYPEWRITER market has changed almost out of recognition during the past three years. In 1980, the year when the Metro and hatchback Escort were launched on the car market, almost all office typewriters sold were electro-mechanical golfballs and IBM was still the undisputed king.

Now, however, electronic typewriters—mainly using daisywheel print heads—have swept the board and IBM has rapidly sunk to a modest share of the world market outside the United States.





Left: the Olympia Supertype with its unique correction system, silent daisy wheel and universal memory. Right: Smith-Corona's new EC1300 model is an electronic compact typewriter of "de luxe" quality. The manufacturer says it is a logical extension of the EC1100, the EC1300 has additional features that will appeal to both the professional and small business user, it has one-line memory correction, automatic centering, and headings are set centrally between margins without a single calculation

The typewriter market

JOHN DERRICK

Electronic typewriters score over old fashioned golfball models by offering low-cost automation. They come in three principal levels:

● First, "correction only" models only have tiny memories for correcting the last line or two that you have typed. These retail from as little as £450 for heavy duty ones, and there are others costing around £200 less which are for lighter applications.

● Next, are "phrase memory" machines selling from around £650, which have memories for commonly used paragraph and sentences typically up to 1,000 characters.

● Finally, there are "fully editable" typewriters, which can be bought for under £1,000 and have memories equivalent to several pages of text with basic word processing facilities, allowing the user to edit letters after they have been typed out.

Industry watchers differ on whether IBM simply missed its chance when the market switched to electronics or whether it made a calculated decision to transfer resources out of typewriters, a market where it is not easy to make money. Either way, IBM has failed to make adequate technical advances and even its most recent releases leave it a long way behind the competition.

Meanwhile, the Japanese have started to fill some of the void left by IBM's decline. Until not long ago, the only Japanese manufacturer selling in Europe was Silver-Reed. Now, however, they are joined by Canon, which seems to have done well in its first year, Brother, Sharp and Panasonic, with others, such as Ricoh and Tokyo Electric, waiting in the wings.

These newcomers are eating into sales of the market leader, Olivetti, and have compounded the difficulties of West German manufacturers, Olympia and Triumph Adler, both of which have been in stormy waters lately.

The other European manufacturers are Facit of Sweden, Hermes of Switzerland and BSI—which bought up the Remington factory—of Holland, all of whom are still managing to compete with the big manufacturers on features and price.

There is, of course, not a single British-made typewriter, nor has there been for a long time, despite the efforts of Imperial, which brands Adler machines, to conjure up visions of patriotic buying.

Following Remington Rand's collapse, the only American manufacturer other than IBM, is Xerox, which entered the British market last year. Rank Xerox has learnt from its mistakes on copiers and is distributing through a dealer network trying to cut out high cost direct sales methods. In an industry where heavy discounting is endemic and margins are increasingly tight, dealer sales are the only way to operate—a fact which Exxon learnt to its cost during a disastrous attempt to launch its now defunct Qyx range in Britain.

One of the main trends visible at this year's International Business Show at the National Exhibition Centre, near Birmingham, is the fusion between electronic typewriters and word processors. Traditionally, the dividing line has been that electronic typewriters only had internal memories with finite capacities, while WPs had external disk storage allowing you to build up infinite libraries of stored text.

Now, however, most typewriter manufacturers are offering disk options on their top models and some also offer full screen options, which, effectively, upgrade a typewriter into a fully-blown word processor, with the typewriter functioning as both keyboard and printer.

It remains to be seen whether typewriter - to - screen - WP upgrades are going to find a large market, however. An up and running system, including the typewriter bought at a discount, would be a little under £2,000, yet for not much more you could buy a microcomputer-based word processor complete with printer and software which would offer greater growth potential, more flexibility and various operational advantages.

Olivetti was the first into the screen upgrade path, with Olympia second. Now, other typewriter manufacturers are joining in and added competition comes from three third party upgrade suppliers who are about to tackle the UK market.

Systel, a successful Californian manufacturer, has appointed Kardex, distributors of the BSI Remstar typewriters to handle its range. Their major U.S. rival, Lexor, has appointed Office International, and Twix, a Swiss manufacturer, is to sell through a Cheltenham firm called Dataplus.

The third party firms are hoping to hold their own against in-house upgrades offered by the typewriter manufacturers or, at least, that the typewriter manufacturers will brand their products instead of developing their own—and at least one or two almost certainly will.

There is little doubt that the number of typewriters in use is likely to decline during the next decade with the growth of microcomputers. For the moment, however, sales remain buoyant due to the heavy demand for replacement machines.

Typewriter sales are likely to hold their own more in Europe than in the U.S. This is because in the U.S., where secretarial salaries are much higher and equipment costs are lower, the logic of taking a more capital intensive approach is all the greater. That means more VDUs and fewer typewriters.

Still very much in business

Facsimile equipment

PHILLIP OPPENHEIM

FACSIMILE — or "fax" — equipment transmits pictures and text over the telephone lines, reconstructing pictures at the other end out of tiny dots.

The world fax population has practically doubled in four years to about a million, concentrated mainly in Japan (where the 4,000 character alphabet precludes the use of telex) and the U.S. Britain has about 25,000 users.

The reasons for the expansion are standardisation and falling prices. Machines now cost less than half what they did three years ago and users obtain more features, such as reduction and RS232 interfaces, allowing machines to receive text from computers (effectively making them act as computer printers).

Fax machines operate at different speeds and the user is charged by British Telecom at the normal cheap or peak rate for the line-time while the machine is transmitting.

This means that speed is of the essence and, whereas a few years ago, all fax machines operated at different speeds and in their own mutually incompatible ways, almost all now conform to one or more of three standards laid down by the international regulatory body, the CCITT. The effect of this is that machines of different makes can intercommunicate and this has spurred the growth of the market during the past few years.

With the Group 1 standard, an A4 page can be sent in six minutes. Group 1 is now regarded as more or less obsolete, however, and no machines are currently being manufactured that conform to it alone.

Group 2, the best bet for most businesses, takes two minutes, while the new digital Group 3 standard, set in 1980, takes one minute.

A few years ago, the Japanese were a relatively minor force in the fax market, which was dominated by the large American manufacturers. Now, however, non-Japanese models are a rarity.

Burroughs, Xerox and 3M used to make their own machines in the U.S., but all three have now gone along the Japanese path to a greater or lesser extent — Burroughs now mainly sells Fujitsu or Murata models, Xerox largely assembles Fuji-Xerox equipment and 3M mainly sell Oki machines.

Plessey never manufactured, but sells Hitachi and Matsushita machines under its own name, and Matsushita recently also began selling some machines under its own Panasonic brand name.

Siemens sells a Mitsubishi machine, as well as a couple of their own low-end German made models. Oki machines are also sold by Muirhead (which originally sold these through the NEB-owned Nexos concern until this ceased; Muirhead then bought back 800 machines, worth £1m, for a total of £1 and they are currently reselling these at £1,500 each).

STC and Pitney Bowes both sell branded Toshiba equipment, though different ranges; Kalle Infotec sells Ricoh equipment and NEC and Canon both sell their own machines. Sharp is soon to sell its own machines in the UK and these may also be sold under the Olivetti and Exxon names (the latter bought up a flourishing U.S. manufacturer, called Qwip, but soon turned this into a loss-maker; they then closed down the Qwip factories and now brand the Sharp range in the U.S.).

Finally, Thompson of France is the only European manufacturer, other than Siemens, and their machines are sold in the UK by 3M. Incredibly, the only new (ie, not reconditioned) non-Japanese machines actually sold under the manufacturers' own name is one obsolete Burroughs model, an ageing 3M semi-automatic and a couple of Siemens models. There are also other smaller Japanese manufacturers waiting in the wings.

At present, fax remains the only widespread method for economical, fast graphics communication and is almost always more economical than telex for text. It suffers, however, from problems of compatibility and from the lack of an effective fax directory. British Telecom's UK directory includes only 3,000 names!

Future developments in the market are likely to include a Group 4 standard for digital lines. Beyond that, it is probable that within five years, fax, telex and teletex will all be supplemented by a communications standard that will allow both text and graphics to be sent to a new generation of low-cost laser printers at higher resolutions than are now possible with fax, and much faster.

For the moment, however, fax, like telex, is very much in business.

More choice as new suppliers enter the market

Telephone equipment

JOHN DERRICK

BUYERS WHO had hoped for immediate changes following the 1981 Telecommunications Act were disappointed. Although the Act removed British Telecom's (BT's) monopoly on the supply of all types of telephone equipment and certain services, the subsequent liberalisation process took place so slowly that the market in certain vital areas is only beginning to open up this autumn.

In particular, the buyer is only now starting to have a choice at the low end of the PABX market.

But by the end of the year, at least six suppliers will have begun supplying new electronic "key telephone systems," the type where any extension user can answer incoming exchange line calls and transfer them internally. (These systems can also generally be programmed so that not everyone takes incoming calls, or with a routing system so that certain extensions only ring when an incoming call is unanswered on other ones.)

BT has been in this market for over two years, enjoying its position as monopoly supplier. It currently has three products, the Senator, made for them by GEC, Ensign, made by TMC and the Herald, made jointly by TMC and STC.

Between them, these serve offices with between two lines and four extensions and 10 lines and 36 extensions.

Although the delay in allowing liberalisation to take place was, supposedly, to help UK manufacturers prepare themselves, it looks as though there will be a significant overseas influence in this market.

Under licence

All of the six independent suppliers to have come through the difficult approvals process are either selling imported equipment or producing systems under licence from overseas manufacturers.

Ansafone's E308/E616 systems, for example, are assembled under licence from NCE in Japan. Intercom Communications of Nottingham is licensed by the Sanhar Corporation of Texas, though they are using mainly UK components.

Shipton Communications is importing equipment from DETEWE of West Germany. Northern Telecoms will be importing their equipment from Canada, though UK assembly is on the cards. Even Plessey is making under licence from Nitsuko of Japan. And the sixth supplier, Tie Communications, is a U.S. company which will be importing its systems from America.

By contrast, during the days of the BT monopoly, virtually all equipment was British. BT's traditional suppliers will mostly continue to work mainly through BT in those parts of the market where BT supplies equipment.

Some, such as TMC, will not compete with BT at all, while a few, such as Mitel, will sell the products they supply to BT under their own name as well, a practice known as "grand-fathering."

Faced with competition, British Telecom is no longer committed to its "Buy British" policy, however. It has, for example, renounced Ansafone for the Hong Kong made Answercall telephone-answering machines which it now sells under its own brand name. And it has made clear that where its traditional UK suppliers cannot supply the right equipment at the right price, it will continue to look abroad.

Speculation is rife on what effect the new competition in key telephone systems and PABX will have on pricing and who will emerge as the market leader.

It seems inconceivable that prices will not fall and the buyer in autumn 1984 could well be paying at least 20 per cent less for comparable equipment compared with today.

BT is determined to remain the major supplier and is unlikely to allow itself to be undercut too heavily. With more financial muscle than most of its competitors, BT could prove difficult to beat if a real price war was to break out.

BT is also hoping to have the edge on many of its rivals when it comes to service and support. Despite the often-criticised service it gave its business customers until not very long ago, its performance on installation and maintenance has now improved considerably in most parts of the country.

Its image is still tarnished, however. Earlier this year, a major survey by What to Buy for Business magazine revealed that only 3 per cent of companies were prepared to give BT an overall "excellent" rating and the department which came out worst was sales, judged "poor" by 44 per cent and "good" by only 17 per cent.

Whoever emerges as the market leader, there is no doubt that the real winners will be the buyers. The powerful combination of liberalisation and technical innovation leaves businesses with a good choice of equipment that is vastly superior to what was supplied until recently and less expensive as well.

Cutting down the paperwork

Case study: dictation equipment

MICHAEL WILTSHIRE

THINK OF a policeman at work and most people conjure up a vision of bobbies on the beat pounding the streets or pandas tearing after get-away cars.

Forgotten are the hours of tedious, often handwritten paperwork.

Now, however, the West Yorkshire Metropolitan Police have discovered a way of reducing the clerical work done by their police officers by as much as 30 per cent.

"Project Paperchase," devised by the organisation department, was an 18-month experiment aimed at cutting down the amount of time spent by police officers doing clerical work, so that time could be spent more effectively on the streets and less in the office.

The main purpose of the organisation department is to undertake research into all aspects of police practices and procedures, together with responsibility for evaluation of items of equipment.

It was recognised that staff were spending valuable time on unnecessary paperwork and, in some instances, duplication of effort was taking place. It was the task of the Organisation Department to find a way to cut down on this wasted time and thereby increase efficiency as well as provide officers with greater job satisfaction.

The West Yorkshire Metropolitan Police Headquarters are based at Wakefield and the Force, which consists of 14 divisions and 28 sub-divisions, has a total police staff of 5,154.

Following local government reorganisation in 1974, a number of different types of dictation equipment were inherited by the new Force, including a centralised system in one of the City areas.

A rationalisation programme was commenced and equipment was replaced progressively. The Force chose equipment supplied by Philips Business Equipment Division.

Fifty desk top pieces of equipment — Model 505 transcribers and Model 812 dictation/transcription machines were purchased, as well as a large number of pocket memos, from the Yorkshire Purchasing Organisation, through the Leeds based Philips dealer, Harold Firth.

The desk top pieces of equipment are normally housed in specially reserved rooms to give officers a quiet environment in which to dictate their reports.

The basic 505 transcription machine comes with headphones and a foot pedal for speed control so that the typist can replay the dictation and type out the copy at her own pace. The variable space playbcak facility means that when the typist's foot comes off the pedal to stop the dictation machine, the tape automatically rewinds back a pre-set amount of in between one and ten seconds.

The top of the range 812 dictation machine incorporates a microphone rather than headphones, a pedal stop/start control and the unique Philips indexing facility.

Now gone are the days when typists had to decipher scrawled handwriting hurriedly scribed by weary police officers after a full day's work on the beat.

The new dictation equipment has played an important part in the streamlined procedures introduced by the Force and use of pocket memos has proved "invaluable." Six have been issued to each Sub Division and, in addition, some senior officers and staff engaged in Specialist Departments have received a personal issue.

A big advantage of the pocket memos is that their portability allows the police officer to use them whilst on patrol away from the police station.

● Above: the executive 660 pocket memo from Philips, claimed to be the smallest model in the UK market. There are at least 20 suppliers of portable and desk-top dictation equipment and a number of them are featured at this week's International Business Show, including Sony's mini/micro cassette adaptor.

● Right: a diagram of the British-designed "MT" centralised system from Thos. Hill International. The system's programing facility provides a high level of supervisory control. Centralised systems offer the most cost-effective means of dictation for the larger company.

Contenders in the centralised sector include Dictaphone, the market leader; Lanier; Harford; Olympia; Peter Williams; Philips Business Systems; Southern and Sony.

At IBS, Dictaphone, a Pitney Bowes company, will be featuring the Nucleus voice processing system—"a centralised dictation system of the electronic office, but designed to take today's hybrid electronic/paper office forward in a practical way," says Dictaphone's managing director, Mr Bill Cottle.

Nucleus uses a small word processing unit of its own for automatic dictation and transcription work measurement and analysis, job-tracking and word processing supervisors information. Users may opt for cassette or endless-loop recording.

Sony will demonstrate its RD6000 Network system at IBS. Network enables correspondence of any length to be dictated over ordinary telephone handset to a single centre where a microprocessor controller system earies out recording, call-logging and cassette change-over automatically.

High cost of making the wrong choice

Leasing

MICHAEL WILTSHIRE

AROUND 80 per cent of office computer equipment is on lease. But while this arrangement clearly offers many advantages, one of the worst leasing mistakes a company can fall into is to make a hasty choice of equipment and find itself stuck with the wrong computer system.

The cost each year of such "computer disasters" is estimated to at least £60m in the UK alone. This is the view of Atlas Computer Consultants, which recently surveyed 200 UK computer installations.

According to the consultancy, 20 per cent of the 30,000 business systems supplied each year in the £10,000 to £100,000 price range later proved to be inappropriate and have to be replaced.

The chaos resulting from selecting the wrong system can sometimes lead to bankruptcy, especially if the company concerned is a small business which sees computerisation as the answer to a make-or-break situation, says Mr Maurice Hamlin, managing director of Atlas.

"Literally every week we hear of another disaster," he says. "Although people who have got it wrong are often very reluctant to admit it.

"That's probably why many of them do not complain as much as they should, but it's happening all the time—and not just to small companies. Even people with considerable computer expertise can be fooled."

While Britain has the highest per capita use of computers in Europe, many potential users do not really know what computer equipment and software is best-suited for their needs.

"You need the right advice," adds Mr Hamlin. "One trouble in the UK is that we are so undiscerning and so trustful in these matters."

Mr Hamlin would welcome legislation to tie a supplier and consultant to a particular specification, so that the high rate of computer disasters would be reduced.

Atlas has developed a systematic answer to computer purchasing errors: that is, to use a computer to identify suitable selections.

An analysis of the purchaser's business is fed into an information databank which holds pages of technical fact on each system from 1,200 suppliers.

The computer also identifies more than 25,000 application programs in 320 areas of industrial, business and professional life. More than 200 suppliers take part in the Atlas scheme and the number grows as additional firms become pre-eminent in the read-out.

1,200 suppliers

Atlas evaluates every client against the total base of 1,200 or more suppliers of every size and type, meeting 95 per cent of requirements through its organisation.

Each item of equipment is cross referred to the application programs it can support. There may be as many as 60 different aspects to requirements, ranging from software codes to suitability for particular trades and support available in specified localities. The computer answers with a short-list of suitable sources.

In estimating the loss of £60m through computer disasters, Atlas adds that the loss does not allow for the inconvenience and upset caused to the user and his customers—which greatly increases the loss experienced by forced replacement of the computer system and application software. In fact, the chaos resulting sometimes bankrupts a business.

Nor does it allow for hasty purchases of small microcomputers, large numbers of which have been vaguely intended for use as a business tool, in which their owners were frustrated.

The main mistakes are:

1—Evaluation which overlooks essential aspects of the user's business.

2—Sale of single user systems when multiple application is necessary.

3—Equipment and software proves a poor fit for the business concerned.

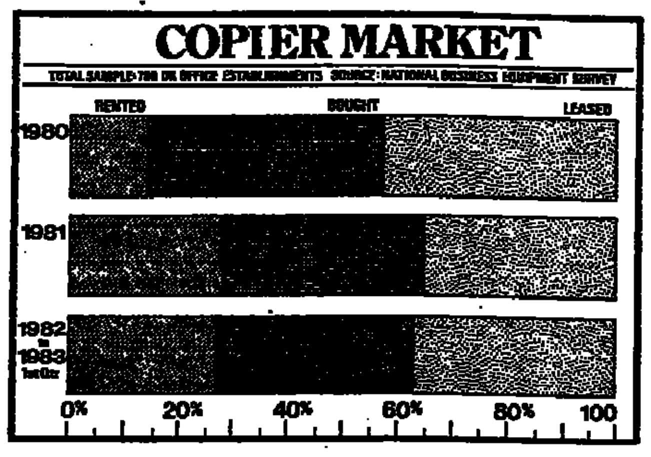
4—Capacity is inadequate, either at the time of installation or for expansion which should have been foreseen.

5—Programmes are not written in an appropriate commercial, technical or scientific language.

Not taken into the reckoning are the many selections which could have been improved upon, although the user can scrabble through.

Similar mistakes are also made sometimes in purchasing larger computers, priced above £100,000. According to Atlas, a computer department may be so set on buying a main frame it overlooks the fact that a large mini distributed system would be more suitable.

"Empire building" by computer departments buying or using a main frame has harmed many companies.



Patterns in copier rental

Apart from computer equipment, the single most expensive item of equipment in most offices is the photocopier.

Research by the National Business Equipment Survey (NBES) into the popularity of renting, leasing and purchasing of new copiers, indicates a decided shift in patterns of acquisition over the period, 1980-83.

Whereas new copiers acquired in 1980 were split roughly 50:50 between those bought and those leased, with only a minority of 14 per cent rented, the 15-month period between 1982 to the first quarter of this year shows that, though leasing and buying were still the most common methods of acquisition, they had fallen from their 1980 peak of popularity. More than a quarter of all office copiers introduced in 1982-83 (first quarter) were obtained via a rental scheme.

Mr Gautam Barua, director of NBES, the marketing consultancy specialising in the office automation industry, explains the reasons behind the rapid rise in renting: "Medium-volume users of copying machines contributed significantly to the rise in renting during the 1980-81 period. Technological factors played an important part in this.

"Companies are generally reluctant to commit themselves to a long-term four-to-five year leasing arrangement when they fear the machine will be technologically outdated within the period.

"In addition, prices of machines are dropping so quickly that companies believe renting offers better value, as it's a comparatively short-term arrangement, in contrast with leasing and does not consume funds, as with buying outright."

An additional factor in the rush to rent was the recession, he says. Companies, apprehensive of the future, tend to favour renting when the economic climate makes the future uncertain, as this arrangement enables them to avoid immediate outlays of capital.

"During the following year, 1982-83, the renting, leasing and buying patterns remained more constant," he adds.

As the recession began to relax its grip a little, companies mentally readjusted, the pressure relaxed and the panic was off. Hence the statistics for renting stabilised in the more recent period.

During the period 1980 to early 1983, leasing as a method of obtaining a new copier suffered an overall decline. The sharpest drop occurred in the early period, 1980-81, when figures of new copiers leased fell from 43 per cent of office machines to 35 per cent.

But, in contrast to buying and renting, which both continued to lose popularity, leasing rose marginally during the period from 1981, showing a 2 per cent rise to 37 per cent early this year.

Are you sitting comfortably?

Seating

MICHAEL WILTSHIRE

MORE THAN 11.5m working days are lost each year in Britain alone due to back pain and related disorders, according to the Department of Health and Social Security.

Most companies spend a great deal of money on products designed to make people more productive and yet a time loss of five minutes every two hours due to sitting discomfort is not unusual.

With today's salary rates for clerical staff for example, it means that there is approximately a £400 annual loss per person due to poorly designed seating.

To achieve compatibility with today's systemised office, seating must have the following features to ensure a healthy happy and more productive workforce:

(a) automatic height adjustment to accommodate ease of movement from a writing desk position to a lower level of using VDU's and computer terminals.

(b) Five star base with twin track castors providing greater stability than a four star base and making the most profitable use of space by basically fitting within the perimeter of the chair.

(c) Correct lumbar region support with waterfall seat front to relieve pressure on the user's thighs.

(d) Durability in relation to the frame base and arms.

(e) Humanising aesthetics with regard to colour and texture of fabric.

In the spring of 1981, a paper which was presented to a Nato symposium at Cambridge was published which measured the ability of ergonomic chairs on the market to fit the fifth through to the 95th percentile requirement. In other words, from the smallest woman to the largest man.

The critical areas which were examined were:

(1) Location of the sacrolumbar curve.

(2) The side to side seat radius.

(3) The side to side back radius.

(4) The body centreline.

(5) The thigh centreline.

Most of the products tested were found to have either ergonomically incorrect designs or accommodated only a small portion of the entire user range.

Those chairs that do happen to have good contours still have another problem. They provide support to the lumbar area of the lower back only when sitting in the one position that coincides with the curvature of the chair.

When the occupier leans back or slouches, pressure is transfered to the shoulders or upper ..... while the lower back receives no support at all. The examination and subsequent selection of office seating should be based on function first, and aesthetics second. There are enough chairs on the market to allow for both factors.

In conclusions, designers and architects should be aware that today's technology dictates a lot more than aesthetic appeal and although British office furniture manufacturers developed late, they have learned from their early mistakes and have taken the advice from "technology" manufacturers as to the requirements of systems furniture.

Mr Jeff Brown, marketing director of Vickers Furniture, is the chairman and council member of the British Office Furniture Manufacturer's Group of the Business Equipment Trade Association.

Mr Jeff Brown, Marketing Director of Vickers Furniture and Chairman of the British Office Furniture Manufacturers group of BETA: "UK manufacturers have hidden their light under a bushel for too long," he says

There are 28 member companies in the BOFM group, which are all major British manufacturers and whose main objective is to simply show the world that British products are the best and to illustrate on a regular basis why they are the best," he says.

"We have hidden our light under a bushel for too long" says Mr Brown, "and it is high time that buyers, prospective buyers, architects, designers and specifiers, in all markets of the world, realised that we are one of the most progressive industries in the UK, employing over 8,000 people, with a turnover of nearly £150m."

"There is a great deal to be done by way of informing those with specifying and purchasing authority, who are clearly not familiar with the products offered by the British office furniture industry and that is what the BOFM group is all about."

More details on the BOFM group are available from Mr Peter Lane, at BETA, 8 Southampton Place, London, WC1A 2EF.

NEW FURNITURE LEASING PACKAGE

LEASING OFFICE furniture has been a useful technique in the past for companies to improve their working conditions without disturbing their capital budgets.

Now Herman Miller, the major office systems furniture manufacturer, has put together a package which allows companies to install integrated office systems under the leasing method, thus considerably improving their use of valuable office space and reducing costly overheads.

The money that companies save by using systems offsets their leasing costs, also leasing rentals are a business expense allowable against tax.

"This new package in effect allows our customers to enjoy a double saving," says Mr Gary Vinson, UK managing director of Herman Miller. "First, office furniture systems enable companies to make real cost-savings through more efficient use of valuable space. These savings can normally be offset against the cost of leasing.

"But in addition, the cost of installation, planning and design services are included as part of the total lease plan. This enables cash-starved companies in the current recession to improve their working conditions and increase productivity without eating into their capital budget," he adds.

Mr Vinson says that customers can thus reap the benefits today of systems furniture. This means lower maintenance costs, more appropriate working offices with greater adaptability, whilst immediately achieving net savings, after paying rental charges, which range from 0.5 per cent to 2 per cent of their employee payroll costs.

Herman Miller believes that this is the first time that a comprehensive planning service, ranging from design consultancy work through feasibility studies to the final installation of the fully integrated furniture system, has been offered in this manner.

Electronic equipment brings strong influence for change

WELL-DESIGNED working environments save money. This is a fact which is gradually gaining acceptance in Britain, even though a recent survey shows that more than 70 per cent of UK companies still admit to using office space ineffectively.

Staff work more efficiently in a well-designed, carefully planned environment especially if it is a visually more stimulating and less physically less frustrating work place. Put another way, office systems which are tailored for the job help to speed up work and reduce the pressures placed upon staff.

Where the installation of a specifically planned office has replaced a piecemeal arrangement which has just been lumped together over the years, companies have later been able to point to considerable savings in time, staff and costs.

Such benefits are often difficult to quantify in advance, however. Much current office reorganisation is obviously being carried out in response to the need for electronic equipment which is itself a time saver. The fact that good office planning equals cost-savings must be accepted.

Leading office furniture manufacturers, such as Herman Miller, Hille, or Lucas, to name but a few, provide expert office planning services which are an important factor in the choice and efficient use of the wide range of items of furniture and equipment they offer.

With more user-choices to meet more modern office functions, office planning is an increasingly complex subject. Help from the experts is nearly always to be recommended.

If an office manager decides to use the design and planning services of a manufacturer, this usually means that the system has already been chosen. If the manager has little expert knowledge of modern office planning then there are advantages in appointing an office planning consultant, or a design group. The space planning consultant will select, perhaps, three systems suitable for the job from which their client can choose.

A working office should be more than a merely functional arrangement of furniture and equipment. To encourage first class work, it also needs to be a sympathetic and stimulating environment.

As office furniture manufacturers have led the way in producing a growing range of systems, functionally and aesthetically designed for individual task, so design consultants can help to create ideal surroundings for them. This is a specialised job, requiring a wide variety of skills, where organisation, psychology and design factors meet.

A competent design group will probably have a range of successful projects to show to new clients—"before making a choice, ask around and spend a lot of time looking around," says one leading design group, Fitch.

Interior design trends

JEAN SHERIDAN

Consultants must not only be expected to achieve the right plan and deign, but also to avoid a waste of the client's time and money during the installation stages. There is a systematic process which must be worked through, thus avoiding delays and keeping strictly to a pre-planned timetable and budget. In one recent example, Fitch have successfully completed their largest-ever office installation, for more than 2,000 people.

The main arguments for and against open-plan offices have long since died down, as open-plan largely won the day—although there is a distinct trend now towards a greater use of screening and a limited increase in the amount of cellular office space.

Today's well-planned office will, in theory, eliminate such old-time problems of staff who hog window space or build barricades with filing cabinets.

In the past, open plan schemes have often proved to be counter-productive since they were not really planned at all as problems subsequently arose over noise levels, lack of privacy, poor ventilation and lighting, plus visual distractions and regimented desking.

Some poorly-informed office managers merely saw open plan as the simple answer to space-saving problems and thus set up office operations without expert help or design. Some of the more ugly and unproductive examples gave open-plan a poor reputation which it is only just living down. As with so many ideas, it was not the concept that was wrong, but the way that it was applied.

While the average British office still leaves much to be desired, the arrival, in more recent years, of systems furniture has helped to transform some office environments, particularly for larger, more forward-thinking organisations.

Systems furniture is either wall-hung (such as that pioneered by Herman Miller) or linked workstation desking. At the moment there seems to be an expansion in, and preference for, the latter, or a mix of the two. More recently, a third system, with desks on a beam, has been seen, but as yet there are not enough of them in use in the UK to make any judgement.

Design styles in European and American offices are moving towards a more "sympathetic" environment. Companies which are installing systems furniture are more often demanding wooden work surfaces, while textured more neutral-coloured screens are replacing the harsh, bright, colours of previous years.

Energy-efficient up-lighting, eliminating harmful glare, also helps to create a more relaxed but, nevertheless, efficient-looking environment.

The use of more localised lighting adds, of course, to the already complex problem of cable management: many buildings, even those of more recent construction, often have inadequate trunking facilities to cope with cable management. Thus, the onus is often placed upon the manufacturers of systems furniture to incorporate wire management within screens and desking.

Teletex likely to supersede telex

Electronic mail

PHILLIP OPPENHEIM

UNTIL RECENTLY, most businesses were stuck with telex and facsimile for sending text messages quickly. Now, however, computer communications and teletex look set to take a large share of the so-called "electronic mail" market.

Telex is not yet on its last legs, however. Although it is slow and only transmits capital letters, it does have a large user base—around 100,000 in Britain and a million worldwide—and it has undergone considerable development recently.

Before liberalisation in 1981, only British Telecom (BT) could supply tlex terminals and its range was largely obsolete. But faced with competition, BT now supplies automated electronic terminals made by Trend Communications and STC who, along with Transtel, also sell their machines direct. These cost about £3,000 and offer—among other things—editing facilities and automatic re-dial of engaged numbers.

For the larger user, "message switches" — specially programmed minicoputers working out at about £1,500 to £3,000 a screen—can handle multi-line traffic and support up to over 100 screens. The main suppliers are British-Format, Racal, ATS, Fenwood, Cherni-keeff, Ferranti, STC, Hugh Pushman and CASE.

Meanwhile, even users of simple teleprinters have limited automation available—in particular, tape punches allow typewriters or WPs to produce telex tape.

Computer communications, however, looks set to eat into telex's market. Computers can send data over the normal phone lines (the PSTN) via devices called "modems" which cost from about £200 and operate at various speeds. Even the slowest are *four* times faster than telex and can send a page of text in under a minute.

The main suppliers are Racal-Milgo, CASE, Thorn EMI Datatech, Micom Borer and the U.S. market leaders. Anderson Jacobson.

Apart from a modem, you will also need communications software for your micro, usually costing around £200. (One British manufacturer, Torch Computers, produces micros with modems and comms software already built in).

Computers can also use British Telecom's specially computer - oriented Packet Switched Service (PSS) which is most economical for frequent, long distance traffic. In addition, BT now offers private digital lines, a service known as X-Stream, as does its now competitor, Mercury.

Unfortunately, computers of different operating systems and modem types cannot intercommunicate. For this reason, computer communications are best for regular traffic between two points rather than for general messaging to a variety of locations.

Surprisingly, however, many companies still use telex for point traffic.

To overcome the problem of incompatability, the CCITT—an international body setting communications standards—fixed a standard two years ago for communicating micros, word processors and even electronic typewriters. This is allows machines of diffierent known as "teletex" and it allows machines of different makes to intercommunicate at speeds up to 30 times faster than telex.

Teletex will probably eventually supercede telex, although in the meantime the two systems will become inter-linked, allowing communication between them, albeit at telex speeds.

Britain is now a year behind West Germany and Sweden in the introduction of teletex systems. The Department of Industry had to offer a £4m subsidy to encourage British manufacturers. As a result, Ferranti and GEC, among others, have announced systems, costing around £1,000 to £2,000 per terminal which will be available by the end of the year.

In the meantime, an alternative are the increasingly popular electronci mail bureaux, such as BT's Gold, which give users access, via the phone lines, to a central computer where messages are stored and collected. Gold also allows users to send telex messages.

Poised for expansion

Vending systems

JOHN DERRICK

TECHNICAL INNOVATION is providing the main interest in the vending industry, where sales are at best static due to the recession.

One industry expert, Mr Derrick Skinner of the Automatic Vending Association of Britain (AVAB) says: "If no one builds new offices, factories or schools, then there's clearly less need for new equipment."

Mr Skinner adds more optimistically, however, that "the industry is poised for expansion and it's waiting for a building boom." In the meantime, he points to recreation as the main area where machine sales are proving buoyant.

Innovation is at present concentrated around two areas. The first is the growth in vended food sales, where machine suppliers and caterers are developing new approaches to serving full hot meals. Vended food no longer means just a Mars bar and a stale cheese sandwich—in some companies, this is giving way to "meat and two veg," served from a machine, rather than by a traditional canteen.

Leading development in the vended food market are Wittenborg and National Vendors, with Roboserve also putting up a strong performance.

The other main area of innovation is the application of electronics. At one level, electronics only affects the internal workings of the machine—reliability should be increased, drinks can be measured more accurately and maintenance can be reduced. At another level, it opens up whole new possibilities.

"Cashless vending" is one such example, with some companies now issuing their staff with plastic cards for insertion in the machine in place of coins, rather like the ones used in British Telecom's special payphones.

Some companies find that this makes for greater efficiency overall with better security and lower handling costs, but the mass market is unlikely to be affected for some time.

Another electronic feature which is beginning to develop is automatic data retrieval. This means that data is gathered in varying degrees of detail about all the transactions the machine handles—even down to how many users choose extra strength coffee, instead of standard strength — all very well, providing you do make worthwhile use of the information. Data can be gathered from a single machine or gathered from several and printed out.

Despite the growth of food vending, drinks machines still account for most of the market, and GKN Sankey remains in its traditional place as leader.

The drinks market can be divided into three sectors. At the bottom are the manual machines, the sort where you take a cup from a stack and place it under various nozzles which dispense ingredients and water separately. These range from about £150 to £1,750, the very cheapest only working on "free vend."

Next are the automatics, where you put your coin in the slot, press some buttons for your selection and wait for a cup to appear in a hatch ready to drink, the mixing having taken place inside the machine. These range from £2,000-£4,000, though there is quite an active trade in reconditioned machines.

Finally, the "in-cup" system, where the ingredients are supplied already packed *in* the cups, and the machine merely dispenses first the cups and then the water.

The advantage of in-cups over automatics is that they require less maintenance, but, though they were the rage two or three years ago, their popularity has levelled off lately, particularly with the technical advances on automatics.

It pays to shop around

Stationery purchasing

JULIAN LLOYD

TO THOSE who are weary of coping with the rigours and complexities of buying computers or copiers, purchasing stationery is one of the few simple pleasures left in a buyer's life.

There is nothing very technical about it and it is a good opportunity for a buyer to put his feet up and re-establish contact with the stationer who has been reliably supplying his firm since the Festival of Britain, or the one which was offering generous discounts when England last won the World Cup.

Indeed, when it comes to stationery, most buyers do not lose too much sleep—they just lose money instead.

In a recent survey, *What to Buy for Business* magazine compared prices submitted by 40 commercial stationers selected at random on the same "shopping basket" of goods. The least expensive total price was just under £980, while top of the price league was a Cardiff firm which asked a staggering £1,680 for the identical goods ordered in the same quantity.

The message is clear—buyers should take care to shop around and should put their requirements out to tender at least once a year, not just once in a blue moon.

Care should also be taken to go to the right sort of supplier. Nothing can be more wasteful than sending a secretary down to the nearest High Street stationer with a list of items to bring back. Best value comes from the so-called "contract" suppliers who have lower overheads, yet offer the convenience of deliveries.

There is more to getting good value on consumables than shopping around, however. It is also a factor that should be borne in mind when actually selecting equipment. The reason is that some types of equipment tie you to particular makes of supplies — and the equipment vendors often make a killing on their captive supplies markets.

Not everyone rushing out to buy a shiny new electronic typewriter realises that the purchase could result in paying several hundred pounds a year more for ribbons for the one machine, compared with the ribbon cost of an ordinary golfball model.

Whereas almost all golfballs run on low-cost IBM Selectric-compatible ribbons, no standard has emerged for electronics and some electronic typewriters use ribbons that cost twice as much, yet give half the yield.

The result: a four-fold increase in supplies costs which most buyers do not realise until it is too late.

Some electronic typewriters use more economical ribbons than others, however, so it is a matter of probing into running costs before buying equipment.

The same goes for copiers, where most users pay a "copy cost" of between around 0.7p and 1.5p, which entitles them to all consumables other than paper, as well as parts and labour when the machine breaks down. This copy cost varies both between brands and individual dealers and this should be a vital factor in deciding which machine to buy.

The UK copier supplies market is, in fact, full of restrictive practices which work against the consumer. Where as in the U.S., you can walk into any stationers shop and buy a bottle of toner made by one of several manufacturers, for any number of makes of copier, in Britain the supply of toner is generally effectively tied to the supply of replacement parts.

The resulting lack of a competitive market has, not surprisingly, kept prices at an artificially high level—Office of Fair Trading, please note.

In other areas, there are alternatives to the "own brand" supplies sold by the machine manufacturers. If you own an IBM golfball typewriter, for example, you can save a lot by going to one of several suppliers of IBM compatible ribbons, rather than to IBM.

What all this comes down to is that although the stationery and supplies market is not bedevilled by technical complexities, it is an area which calls for shrewd and careful buying. The lazy buyer simply gets taken for a ride.

Still very much alive and well

BEFORE THE microchip made its onslaught on the office scene and brought with it glamour machines with VDUs, cursors and the like, a microfilm screen was one of the more "flash" items of equipment to be seen around the office.

Now, however, the practice of reducing documents to miniature on film for space-saving storage and reference often seems cumbersome and even obsolete next to the option of storing, processing and transmitting data digitally, using word processors, computers and the other elements of the integrated office.

Yet office managers can introduce microfilm into their organisation for a capital investment of less than £100 and, judging by the sheer amount of equipment available, it would seem that microfilm is still alive and well.

There are four main types of equipment for use in most offices, aside from those for more specialist uses. "Readers," which magnify the image and project it onto a screen at the original size, are the one item that everyone needs. In all, there are over 200 models to choose between in the UK market alone, of which around half cost less than £250.

Then there are reader/printers, which also allow you to make paper print-outs of what is on your microfilm, rather like making a photocopy. These start at around £850 and carry on until over £8,000, the price depending, among other things, on the maximum paper size required.

Microfilm usage

JOHN DERRICK

Next are cameras, used for putting the documents on film in the first place. There are different types for the different varieties of microfilm (roll film, fiche and so on), and prices start at £1,000 and rise into five figures. However, many companies prefer not to become involved in the production side of microfilm and instead send their documents to an outside bureau for filming.

Duplicators for copying microfilm cost even more, from £2,000 up to approaching £40,000, but, once again, bureaux services cater for those with only an occasional need that doesn't warrant the capital investment.

Right at the top of the market is COM, which stands for "computer output microfilm." COM equipment links in with a computer to record data on microfilm without the need for producing a print-out on paper first of all. Not only does COM take up a lot less room than paper print-outs, but it can also be produced at the rate of up to 120,000 characters per second—far faster than what you could get from an ordinary printer.

In addition, COM fiche can be read or printed out on readers or reader/printers costing a lot less than computer terminals and computer printers.

COM is not particularly new—it has been around for over 10 years—but it is in many ways the saviour of microfilm, since without it, microfilm would be isolated from the rest of business equipment. COM is another area where you might prefer to go to a bureau, particularly as the equipment costs from around £40,000 to £125,000.

COM is not the only example of microfilm developing alongside the computer. You can also obtain advanced microfilm systems which use a computer to create sophisticated retrieval and filing systems. The idea is that the computer holds information about the exact location of each document stored away on microfilm, enabling an operator to track one down and have it on a reader within 30 seconds.

Some systems go a step further and use bar codes to record information about documents on each frame when the filming takes place.

Most of the big names in microfilm now supply computer-aided retrieval and filing systems. These include Kodak, 3M, Bell and Howell, Imtec and Regma. Prices for turnkey systems tend to start at around the £18,000-£22,000 mark.

Despite these developments, microfilm is not at the leading edge of office automation. Yet suppliers never tire of pointing out that the "paperless office" is still many decades away. As long as there is paper, they argue, there will also be microfilm. They are probably right—but although the industry has so far held its own, it may well suffer a decline during the next 10 years.

A micro-computer work station from Project office furniture. The micro-computer stand has a split level work surface for greater operating comfort. This stand is linked to a printer table which allows paper feed from below. The company has one of the largest ranges of computer related furniture in the UK. Prices for computer stands start at £103

How to link-up the hardware

Cable management

MICHAEL WILTSHIRE

TODAY'S marketplace has an increasingly large range of fixed and mobile computer stands, to suit most types of micro, word processor or VDU. Complete workstations can be built up using the modules and these match into a whole range of office furniture with desks, storage units and office screens.

Safety is another key area for consideration—especially where wiring is concerned.

Computers currently mean a proliferation of wires and cables for power and data transmission.

How to handle these wires, safely, in a manner which allows enough flexibility to accommodate changing needs in the future, and at a cost which bears comparison with alternative methods, is a very important and topical question for many project and office managers today.

The success of having platform floors in computer rooms is already well known. Cost and performance comparisons now also make this the favourite choice for offices—a fact borne out by the increase in the number of such floors being installed today in both new buildings and in refurbishment schemes. One of the largest manufacturers, Propafior of Luton, reports a three-fold increase in demand for office applications over the past three years.

However, even with a raised floor installed, wires still need to be managed around the workstation.

The choice of wire management system for the workstation will depend on:

- The expected degree of permanence of the office layout in each given area.
- The length of run being considered.
- The nature of the wires to be accommodated.

The British Standards Institute Code of Practice (BS6396) covering electrical requirements for office furniture and office screens puts over some important points:

1. All metal enclosures must be earthed.
2. Covers of ducts and connector boxes that give access to live parts should be removavble only with the use of a tool.
3. Cables should be protected throughout their length, particularly where they pass over an edge or between items of furniture.
4. Mains power cables should be segregated from data and telecommunications cables, and individual data cable should be segregated if the systems manufacturer requires it.
5. The risk of liquid spills to sockets should be reduced.
6. All sockets should comply with British Standards.

With these points in view, furniture manufacturers, such as Project, have designed special channels to take sockets, wires and cables from the floor to the worksurface; around the workstation; and along screens.

The advantage of all these items is that they are designed to be fitted only where required—reducing unnecessary expense.

A useful plastic wire manager strip is also available. This has channels into which wires can simply be pressed and just as easily removed when required. It can be easily fitted to any surface, vertically or horizontally, to tidy away power and telecom wires and cables.

The efficient use of lighting in the computer workstation must also be considered. For example, softer light may avoid contrasts and prevent glare and reflection on the VDU screen surface making it easier to read.

As well as space for the computer hardware, workstations should also have sufficient surface area to take input and output documents and for other clerical duties, if necessary—a point very often overlooked at the time of purchase.

Sources for further information:

1—Research into how people are working with computers in offices is being carried out by HUSAT—the Human Sciences Advanced Technology Research Group, attached to Loughborough University.

2—A study on how people respond to stress sponsored by the European Coal and Steel Community is being carried out by ICE, an independent organisation attached to Loughborough University.

3—"Interim Guide to the Safe Wiring of Office Desks and Screens": Business Equipment Trade Association, 1981.

4—"Visual Display Terminals," by A. Cakir, D. J. Hart and T. F. M. Stewart, published by John Wiley and Sons, Chichester.

5—Many of the larger computer companies, including IBM, have produced useful booklets on human factors within computer workstations.

6—Ergonomics consultants Mr Tom Stewart and Mr Bill Morton have provided research material for seminars run by Project Office Furniture. A guide to programming workstations is available from Project at Hamlet Green, Haverhill, Suffolk.

7—"Coping with Cables" costs £2.00 and is available from SPS at Western House, Uxbridge Road, Hillingdon, Middlesex, UB10 0LY.

OFFICE EQUIPPING AND FURNISHING XI

FURNITURE MANUFACTURING PROFILE: KINNARPS OF SWEDEN

Heading for another record year

KINNARPS of Sweden is heading for another record year and now holds an enviable position among European producers and exporters of office furniture.

From very small beginnings, Kinnarps today has the largest furniture production plant in northern Europe. It is a highly automated complex, located 70 miles north of Gothenberg.

This year the company expects a turnover of some SKr 230m (compared to SKr 188m last year) and has now captured close to 40 per cent of Sweden's SKr 500m office furniture market.

Despite its phenomenal growth, Kinnarps (the Swedes pronounce its "Shinnarps") is still very much a family affair. It began in 1942 when a cabinet maker, Jarl Andersson and his wife, Evy, started business from a tiny two-storey building, near Falköping.

By 1970, the company employed 112 people and had achieved sales of SKr 23m. The fact that this turnover has now increased ten-fold is by no means due just to inflation. Greater productivity has resulted from a continuous programme of investment and rationalised methods of manufacture.

The Kinnarps complex today covers some 650,000 sq ft in the heart of the Swedish countryside. From the highly-computerised factories come more than 40,000 work-stations a year. And, of these, an increasingly large number are finding their way into export markets, some as far away as Australia.

Although the range of Kinnarps design is large, a policy of rationalisation keeps costs down and prices at a competitive level.

By paying great attention to the changing needs of the modern office, Kinnarps have been able to win contracts from Sweden's leading companies, including Volvo, Scandinavia's biggest corporation, as well as multinational groups abroad. In London for example, there are more than 300 terminal desks from Kinnarps at the offices of Shell on the south bank of the Thames.

Other important clients in the London area include Lloyd's Register of Shipping, Guardian Royal Exchange Assurance, and the McCorquodale group. Kinnarps' UK concessionaire is Linden Pride (Contracts) of Sutton, Surrey.

In Sweden, Kinnarps have been the major suppliers of the City of Stockholm and the Stockholm County Council for 20 years.

One of the keys to Kinnarps' success is the high sense of commitment to the company by its management and staff who all live within 10 km of the sprawling complex. From the chairman downwards, everyone is on first-name terms. No one bothers with titles.

The company spent £500,000 on new staff amenities which include a swimming pool and a palatial sports complex. Employees' homes are dotted around the site, while the chairman and founder, "Father Kinnarps" as he is known, lives in a modest home alongside the factory office.

Jarl Andersson says today that he is fortunate that his three sons form part of a highly creative management team.

The eldest son, Henry (now company president) along with his brothers Assar and Ola have a formidable reputation in the fiercely-competitive Swedish market where other major contenders include Facit, NKR, Edsby-Verken and TUA.

Keeping ahead

"The brothers," as they are known in the industry, have always aimed to keep production methods four or five years ahead of competitors. For instance, the company is the first in northern Europe to apply ultra-violet hardening treatment to the top layer of lacquer on flat surfaces, such as table tops and shelving.

The plant for this process alone cost £500,000 and provides a considerable improvement in durability and finish on office furniture. U-V hardening is also a quick process and the amount of space needed is only a third of that required for traditional methods of varnishing and drying.

The process also provides big savings in power consumption and also in the amount of varnish used—only about a sixth of what would otherwise be required.

Despite computerised production methods Kinnarps has not abandoned traditional methods of workmanship. Hand work and individual craftmanship is still applied alongside advanced technology.

When asked to summarise the reasons for Kinnarps's success, Jarl Andersson said it was "hard work, especially in the early years; then, keeping ahead on technology as well as bringing in the right young specialists to ensure product flexibility to meet clients' needs."

Thus, when the recession arrived, Kinnarps was in better position than many manufacturers in the sector. The company had "bent over backwards to ensure that each client got what he wanted, when he wanted it and at the right price."

Henry Jarlsson, the company's energetic but unassuming president, has at various times worked at each stage of the production process.

Today he pilots his own jet plane on business trips and has searched Europe for the most advanced automation technology and materials. Much of the specialised equipment comes from West German, Swedish and Italian suppliers.

The company has also used some British equipment but, in general, has not been able to acquire the right high-performance machinery from the UK.

Mr Jarlsson believes that Kinnarps is 10 years ahead of most U.S. production centres—"we'd have their machines in a museum over here," he claims.

His brother, Assar heads up product development while Ola, the other brother, masterminds computer applications and data processing. The brothers take their surname, Jarlsson, from the first name of their father—a very old Swedish custom that is not widely followed nowadays. This again reflects the strong family ties at Kinnarps

Jarl Andersson, the founder, says that if he had to describe his company's policy in brief, it would be "highest quality at the lowest possible price . . . to many people this certainly sounds like wishful thinking, but for almost 40 years we have very clearly shown this to be a reality."

Mr Peter Linden, chairman of Linden Pride (Contracts) of Sutton, Surrey, the UK Concessionaire for Kinnarps

Mr Jarl Andersson, founder of Kinnarps, believes in "highest quality at the lowest possible price"

Kinnarps has a dominant share of the Swedish office furniture market. UK customers include Shell Oil, Lloyd's Register of Shipping Guardian Royal Exchange Assurance and the McCorquodale group

To achieve this, Kinnarps even imports timber from other areas of Europe, because Swedish forest products are often too expensive. High quality has meant aggressive and far-sighted product development, he adds.

As an example of Kinnarps's astute planning, the company achieves considerable savings in energy costs through the recycling of hundreds of tonnes of sawdust. This is transformed into brickettes for fuel by a separate factory. The resultant product is used to heat the entire Kinnarps complex.

Jan-Erik Jonsson, a former banker who now heads up the company's finance and business development, says that Kinnarps is also looking at "wider interests" beyond the office furniture sector. The company has cash reserves of SKr 180m.

With an increasingly strong emphasis on export markets, Henry Jarlsson, the company president, believes that the Swedish market for Kinnarps will, in the next ten years, become its smallest, by comparison, as the company specialises to meet the needs of other national markets and of large overseas customers.

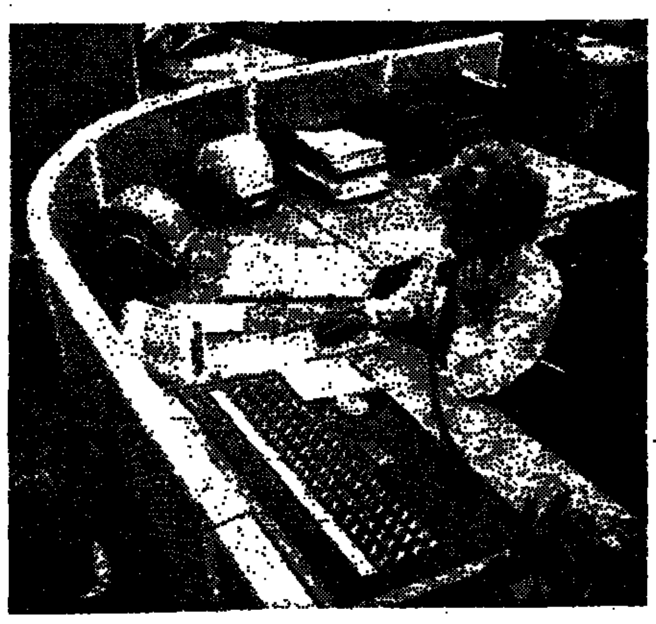
For UK clients, distribution vehicles are loaded directly from the production line and shipped to Britain for delivery through Linden Pride (Contracts) of Sutton, Surrey. Items can be supplied from stock or else specially manufactured to order with delivery in as little as four weeks.

Mr Peter Linden, the company's chairman, is himself Swedish, and he sees "a huge potential" for increasing Kinnarps's share of the UK office furniture market. The company is planning its biggest-ever involvement at this year's International Business Show, opening tomorrow at the National Exhibition Centre, near Birmingham.

While reflecting on the success of Kinnarps and the pioneer spirit that still characterises the group, Jarl Andersson, the founder, says: "It is a nice feeling to be able to look back and note that our product development and direction have been right.

"Sometimes we have been criticised for not having followed fashion and luxury trends; but if we had been—and if we should be doing so now—our development would not be what it is today."

Michael Wiltshire



Kinnarps' most popular range of office furniture is the flexible SH series, a design offering almost unlimited possibilities in office layout.

POLICY OF CONTINUOUS DESIGN DEVELOPMENT

THE strict demands of the Swedish Working Environment Act, plus a considerable awareness among employees of correct ergonomic requirements, have helped to put Sweden well ahead of many countries as regards office furniture design.

Kinnarps, with its dominant share of the Swedish office furniture market, has a policy of continuous improvement in design. Rounded table edges, for instance, have now replaced sharp corners.

All ranges of furniture are made in a choice of beech or oak. Some are also available in walnut or oak laminate.

Kinnarps' most popular range of office furniture is the highly flexible SH series, in which table legs and underframes are of a square tubular steel, with a brown finish.

The basically simple design combines practicality with almost unlimited possibilities in office layout. The working height for tables is 67 to 78 cms. The range includes units for equipping computer terminal and word-processing workstations.

A softer appearance has been achieved with the SRH range, using alternative finishes in oak and beech; it also features rounded table legs of enamelled steel. The CRH range is a similar design, but with chrome steel legs.

Kinnarps' ST range offers more refined styling than the SH range in that the legs and underframes of tables are of solid wood. There is a choice of four finishes: natural or stained oak, beech and walnut.

The company's more prestigious series, the RH range, features table tops that are 40 cm thick, with built-in flush edging, plus rounded steel legs of chrome-plated steel.

The manufacturers also produce a wide variety of terminal tables, document storage systems, straight and curvey screen systems (in three heights of 113 cm, 148 cm and 183 cm) which can be used just as dividers or to support a variety of storage units.

Kinnarps also make seating systems for offices, waiting rooms, reception and leisure areas. In all work chairs the height of the seat and the angle of the back support is adjustable for optimum comfort.

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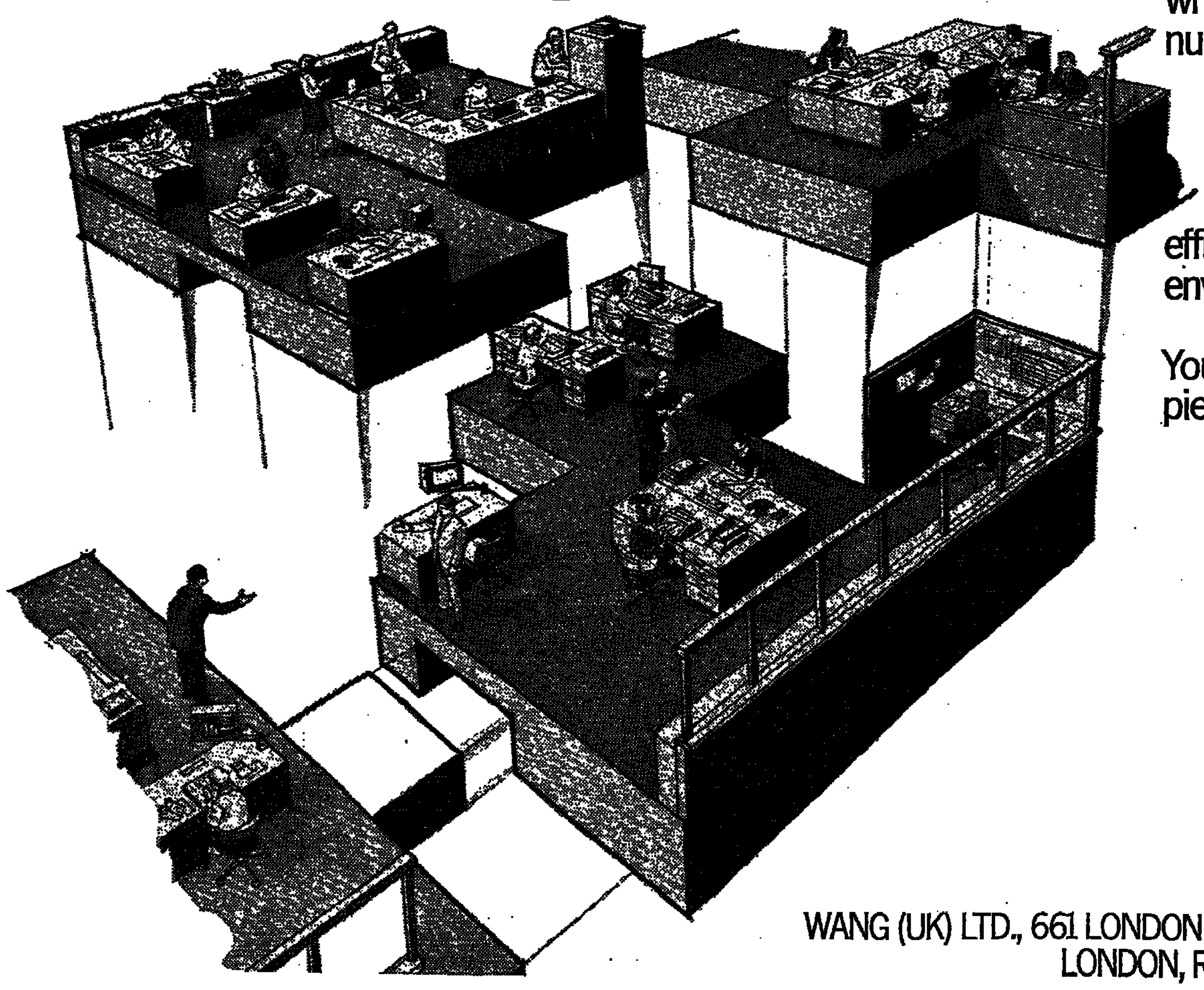

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